S.C. PETROTEL–LUKOIL S.A.
PLOIESTI

APROBAT,
MEMBRU AL DIRECTORATULUI-ING. SEF

25.02.2017

TEMA TEHNICA DE PROIECTARE

1. DATE GENERALE:

1.1. Denumirea lucrarii: Inlocuire elemente conducta SIS 41-06-EF-2,5,6,7,10,20,21;N-06-EF-2,4,12,13,14,15,16,17,18,

1.2. Instalatia (serviciul) beneficiara: Aria de Productie – Sector 1
1.3. Amplasament: Instalatia HPM

1.4. Documente si documentatii de referinta:, P&ID HPM.

2. NECESITATE SI OPORTUNITATE:

Conducta **SIS 41-06-EF-2,5,6,7,10,20,21;N-06-EF-2,4,12,13,14,15,16,17,18,** dupa expertizare in urma masuratorilor de grosimi efectuate de firma TUV, i s-au acordat 4 ani la verificarea din 2016 si scoaterea din functiune din cauza valorilor mici de grosimi sub limita de functionare in conditii de siguranta. – conform Raport inspectie nr 434/30.06.2017

3. PRINCIPALELE CERINTE:

3.1. Elaborare proiect de inlocuit elemente conducta. – conform Raport inspectie nr 434/30.06.2017

3.2. Prezentarea specificatiilor tehnice conductei care trebuie inlocuite.

4. DESCRIEREA SOLUTIEI PROPUSE:

4.1. Tehnologie: Realizarea unui proiect de montaj pentru inlocuit elemente conducta – conform Raport inspectie nr 434/30.06.2017
4.2. Descrierea solutiei propuse pe categorii de lucrari:
(In cazul in care sunt necesare descrieri mai ample – schite privind amplasarea, scheme tehnologica etc – este obligatorie anexarea acestora la tema)

Se va executa si inlocui conducta in baza unui proiect executat de firma reparatoare si avizat de beneficiar in conformitate cu schema izometrica si fisa tehnica anexata.

Nr. crt.	Categorii de lucrari	Descriere sumara	Documente existente	Observatii
1	Tehnologii	NU		
2	Utilaje	NU		
3	Montaj utilaj si leg. conducte	DA		
4	Constructii beton	NU		
5	Constructii metalice	NU		
6	Instalatii apa-canal	NU		
7	Instalatii electrice 2)	NU		
8	Instalatii AMC 1)	NU		
9	Utilitati (aer, azot, apa etc)	NU		
10	Instalatii de incalzire	NU		
11	Instalatii de ventilatie	NU		
12	Mecanizare ex:grinda monorai	NU		
13	Alte facilitati	NU		
14	Devize	DA		

1) Reglari, inregistrari, semnalizari, blocari
2) Surse de putere, blocari, iluminat, avertizare P.S.I. si paza, explozimetre, telefonie, legaturi echipotentiale etc.

4.3. Dotari:_____

4.4.Deseuri, noxe si masuri de protectie a mediului: Conform normelor in vigoare pentru instalatia HPM

4.5. Factori de risc si propuneri de masuri de tehnica securitii muncii: Nu se modifica.

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4. SURSA DE FINANTARE:

5. RESPONSABIL DIN PARTEA BENEFICIARULUI:

- Numele si prenumele: Manea Emilian
- Functia: Inginer tehnolog sector 1
- Telefon: _____

- Termen executie proiect: 01.09.2017

7. AVIZARE:

FUNCTIA	NUMELE SI PRENUMELE	SEMNATURA
DIR. GEN. ADJ. REPARATII SI MENTENANTA UTILAJE	Y. I. EROGOV	
TEHNOLOG SEF	CATALIN NICULESCU	17 24.08.17
ING. SEF ADJ. PRODUCTIE	PARNAU DANIEL	17.08.17
ING. SEF MECANIC	DENYS MAKUSHEV	
ING. SEF METROLOG	ION ENE	
ING.SEF ENERGETICIAN	MAXIM GRECOV	23.08.2017
SEF ARIE	GHEORGHE COMAN	16.08.17.

SEF SIB. Alexandru Valentin 24.08.2017

Intocmit :

Sef inst

Onciu Valentin / 3343

Anexa A

Date initiale pentru partea Tehnololgica

Utilaje statice si dinamice.

1.	Utilajele care vor fi implicate in proiect	Nu sunt
2.	Parametrii de lucru ai utilajelor	Nu este cazul
3.	Inlocuirea utilajelor	Nu
4.	Utilajele care necesita inlocuire	Nu se vor inlocui utilaje
5.	Se vor modifica parametrii de lucru ai utilajelor	Nu
6.	Parametrii de lucru ai utilajelor noi	NU
7.	Utilaje suplimentare/noi	Nu
8.	Parametrii de lucru ai utilajelor suplimentare/noi	Nu este cazul
9.	Echipamente AMC pe utilajele existente	Nu sunt necesare
10.	Echipamente AMC noi pe utilajele existente	NU
11.	Racorduri noi pentru echipamente AMC	Nu
12.	Parametrii de blocare si alarmare pentru fiecare utilaj in parte	Nu este cazul
13.	Caracteristicile sistemelor de siguranta existente.	Nu sunt necesare
14.	Necesitatea calculului componentelor interioare ale utilajului	Nu este cazul
15.	Necesitatea inlocuirii componentelor interioare existente	Nu este cazul
16.	Utilajele pentru care este necesara refacerea calculului si inlocuirea componentelor interioare.	Nu este cazul
17.	Locul amplasarii utilajelor suplimentare/noi	Nu este cazul

Legaturi Conducte

1.	Necesitatea montajului conductelor noi	Da
2.	Locul conexiunilor conductelor noi	Instalatia HPM/ conform schemei din Tema tehnica
3.	Parametrii de lucru ai conductelor existente care fac interconexiune cu cele noi	Pres=15bar Temp=100 °C
4.	Parametrii de lucru ai conductelor noi	NU
5.	Necesitatea inlocuirii conductelor existente.	Uzura cele existente
6.	Specificatiile conductelor care se inlocuiesc	Nu este cazul
7.	Limitele inlocuirii conductelor	Nu este cazul
8.	Amplasarea conductelor	Instalatia HPM
9.	Traseul conductei	conform schemei din Tema tehnica
10.	Existenta spatiului liber pe estacada necasar amplasarii conductei	NU
11.	Necesitatea constructiei estacadelor noi	Nu este cazul

	Lista documentatiei obligatorii pentru partea de Tehnologie
	- desenele ale utilajelor existente

	- cartile tehnice ale utilajelor existente
	- plan amplasare a utilajelor .
	- plan zonare.

Toate campurile evidentiate cu rosu sunt obligatorii.

RESPONSABIL DIN PARTEA BENEFICIARULUI:

FUNCTIA	NUMELE SI PRENUMELE	SEMNATURA
ING. TEHNOLOG SECTOR 1 PRODUCTIE	MANEA EMILIAN	
SEF INSTALATIE DAV3-HPM-Fci H2	ONCIU VALENTIN	

Anexa C

Date initiale pentru partea Automatizari.

1.	Tipul echipamentelor AMC in conformitate cu cerintele tehnologice	Conform Anexei
2.	Necesitatea efectuarii calculelor de verificare a echipamentelor AMC	Nu
3.	Necesitatea inlocuirii echipamentelor	Se vor cuprinde demontarea ,remontarea si punerea in functiune a echipamentelor existente pe aceste conducte ,iar in cazul schimbarii de clase ,racorduri acestea trebuiesc sa fie cuprinse in proiect .
4.	Necesitatea si tipul incalzirii echipamentelor AMC	In functie de cele existente
5.	Propunerea schemei logice al alarmelor si blocarilor	Nu este necesara
6.	Necesitatea extinderii DCS	Nu
7.	Modalitatea amplasare cabluri AMC	Conform existent
8.	Necesitatea extinderii SCADA	Nu este cazul
9.	Modalitatea amplasare cabluri SCADA	Nu este cazul
10.	Producator SCADA	Nu este cazul
	Lista documentatiei obligatorii pentru partea de AMC si Automatizari	
	Specificatii tehnice regulator de temperature diferentiala	

Toate campurile evidentiate cu rosu sunt obligatorii.

RESPONSABIL DIN PARTEA BENEFICIARULUI:

FUNCTIA	NUMELE SI PRENUMELE	SEMNATURA
ING. SEF METROLOG	ION ENE	
ING. TEHNOLOG SECTOR 1 PRODUCTIE	MANEA EMILIAN	
SEF INSTALATIE DAV3-HPM- F-ci H2	ONCIU VALENTIN	

S.C.PETROTEL-LUKOIL S.A.
BIROU INSPECTIE ECHIPAMENTE - FIABILITATE

APROBAT,
INSPECTOR SEF - SEF BIE - FIABILITATE
ALEXANDRU VALENTIN

RAPORT DE INSPECTIE

Nr : 434 Data : 30.06.2017

1. INSTALATIA : HPM
2. ECHIPAMENT : SIS 41 – 06 – EF – 2,5,6,7,10,20,21; N – 06 – EF – 2,4,12,13,14,15,16,17,18
3. PARAMETRI :

Parametrii conform proiect / livret utilaj	Parametri reali de exploatare conform DCS
P = 15 bar ;	Fluid = G+H2+H2S
T = 100 ^{0}C ;	Material : SA 106Gr.A + SA234WPB

4. DEFECTIUNI CONSTATATE :
4.1. Sistemul de conducte **SIS 41 – 06 – EF – 2,5,6,7,10,20,21; N – 06 – EF – 2,4,12,13,14,15,16,17,18,** colectorul de facla inalta presiune, a fost expertizat in anul 2016. Aceasta in urma verificarilor tehnice a primit durata de viata remanenta de 4 ani. Anul fabricatiei : 1975. Firma expertizatoare TUV. Conducta este autorizata cu nr. ISCIR BV CDT 104167.

5. CAUZE POSIBILE : uzura normala

6. REMEDIERE DEFECTIUNI :
6.1. Se vor inlocui in OT 2019 in baza unei documentatii tehnice preliminare intocmite de firma reparatoare conform prescriptiei tehnice aplicabile urmatoarele elemente de conducta : ~~A287-288~~, A428-429, ~~C27, A426-427, 430, A121-122, 277-278, A355-356, C23, A116-117-188,119-120,178-179,184-185, 189-190,295-296,351-352,357-358,384-385~~. Grosimea elementelor de conducta vor fi stabilite de proiectant dupa analizarea documentatiei tehnice.
6.2. Controalele NDT vor fi realizate de firma executanta cu personal autorizat.
6.3. Proba de presiune se va realiza in prezenta inspectorului CNCIR si a reprezentantului SIE la 21.5bar.

7. TERMEN DE REALIZARE : OT 2019

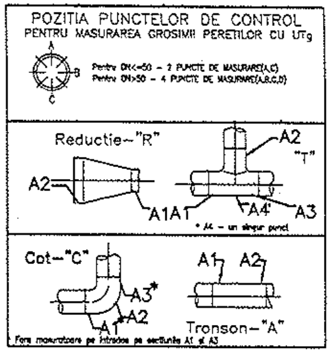
8. RECOMANDARI SUPLIMENTARE : N/A

9. DOCUMENTE ANEXATE :
9.1. Schema izometrica informativa
9.2. Breviar de calcul

10. INTOCMIT : RSVTI
N.P. : CRISTIAN MIREL
SEMNATURA .....

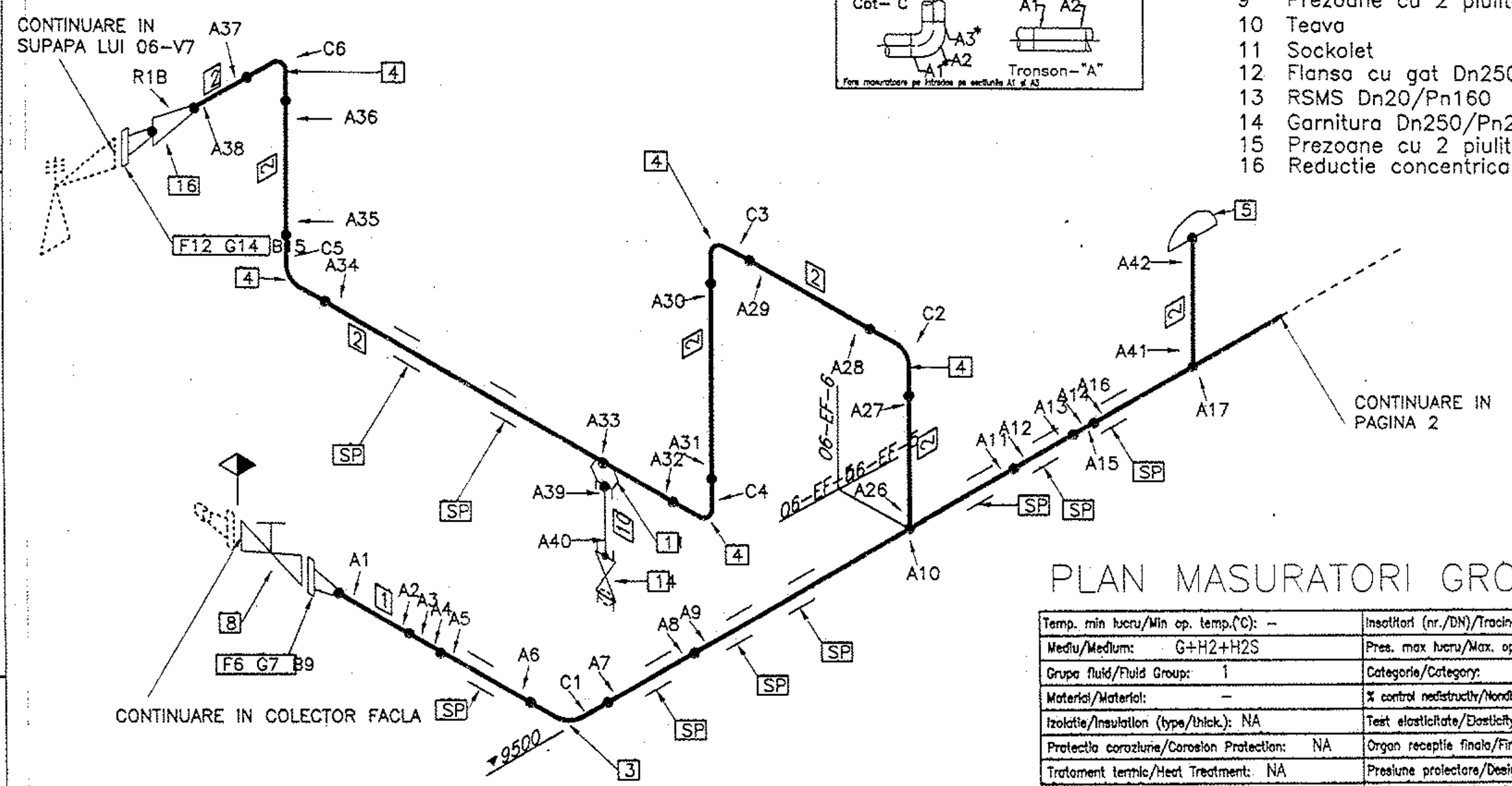
11. AVIZAT : ING. SEF MECANIC
N.P. : MAKUSHEV DENYS
SEMNATURA .....

Numele și prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: C6/2010
Data: 05.2016 Semnătura: [signature]



PIESE DE CONDUCTE - LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	250	63.4 M
2	Teava	100	12.5 M
3	Cot 90	250	1
4	Cot 90	100	5
5	Capac sudat	100	1
6	Flansa cu gat Dn250(ø273x-)/Pn25/B2	250	1
7	Garnitura Dn250/Pn25/B2	250	2
8	RSF Dn250/PN25/B2	250	1
9	Prezoane cu 2 piulite	M27x150	24/48
10	Teava	20	0.2 M
11	Sockolet	100X20	1
12	Flansa cu gat Dn250(ø273x-)/Pn25/B2	250	1
13	RSMS Dn20/Pn160	20	1
14	Garnitura Dn250/Pn25/B2	100	1
15	Prezoane cu 2 piulite	M27x150	12/24
16	Reductie concentrica	250x100	1



LEGENDA:
- limita sistem
- conducta existenta supusa examinarii
- conducta existenta in afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): -	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: -
Material/Material: -	% control nedistructiv/Nondistructiv test: 25%-RT/UTs 25%-PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: -	Presiune proba/Test pressure(bar): -
Protectia coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: -	Diagrama P&I/P&ID No.: -
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C): 100
Clasa conducte/Pipe Class: -	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 Judet Prahova

LUKOIL OIL COMPANY

Proiect-Nr/Project-No	Desen-Nr/Drawing-No	Rev/Rev
16-287/PEVIT	ANEXA 3	00

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 / 17 18 19 20 21 22 23 30 31

Cod Instalatie/Plant Code | Orig.Plan

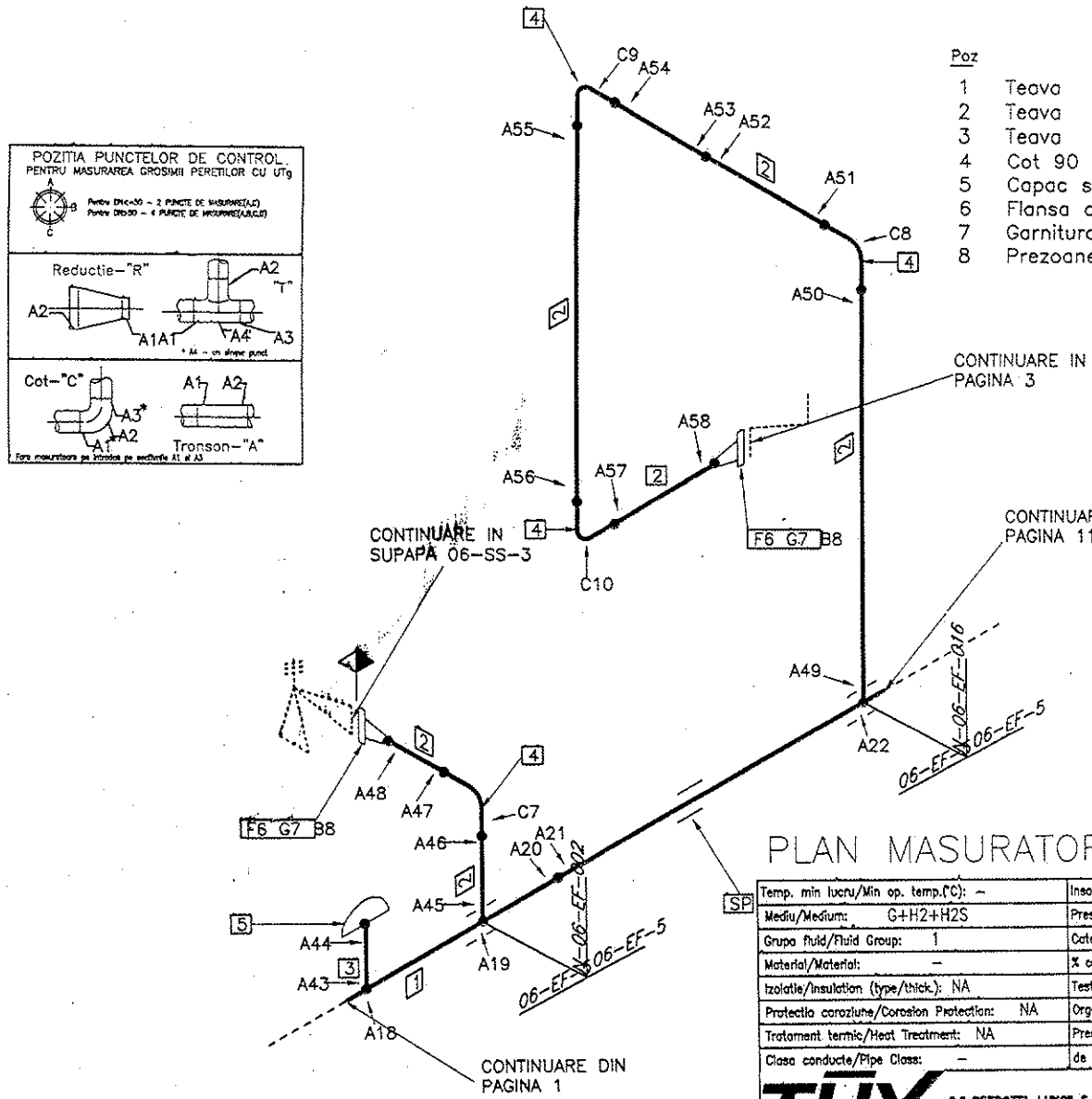
Intreprindere/Client: PETROTEL-LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea [signature]	Ninca [signature]

SIS 41-06-EF-2,5,6,006,007,010,020,21,N-06-EF-002,004,012,013,014,015,016,017,018



PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	250	14.6 M
2	Teava	150	10.1 M
3	Teava	100	0.15 M
4	Cot 90	150	4
5	Capac sudat	100	1
6	Flansa cu gat Dn150(ø168,3x-)/Pn25/B2	150	2
7	Garnitura Dn150/Pn25/B2	150	2
8	Prezoane cu 2 piulite	M24x130	16/32

Numele și prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: 06/2010
Data: 05.2016 Semnătura:

LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%-RT/UT; 25%-PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama PID/PID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100
Clasa conducte/Pipe Class: –	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti
Str. Mihai Bravu, nr.235
Judet Prahova

LUKOIL OILCOMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Proiect-Nr/Project-No	Desen-Nr/Drawing-No	Rev/Rev
16-287/PEVIT	ANEXA 3	00

17	18	19	20	21	22	23	30	31
Cod Instalatie/Plant Code							Orig.Plan	

Intreprindere/Client: PETROTEL-LUKOIL

Instalatie/Plant: HPM

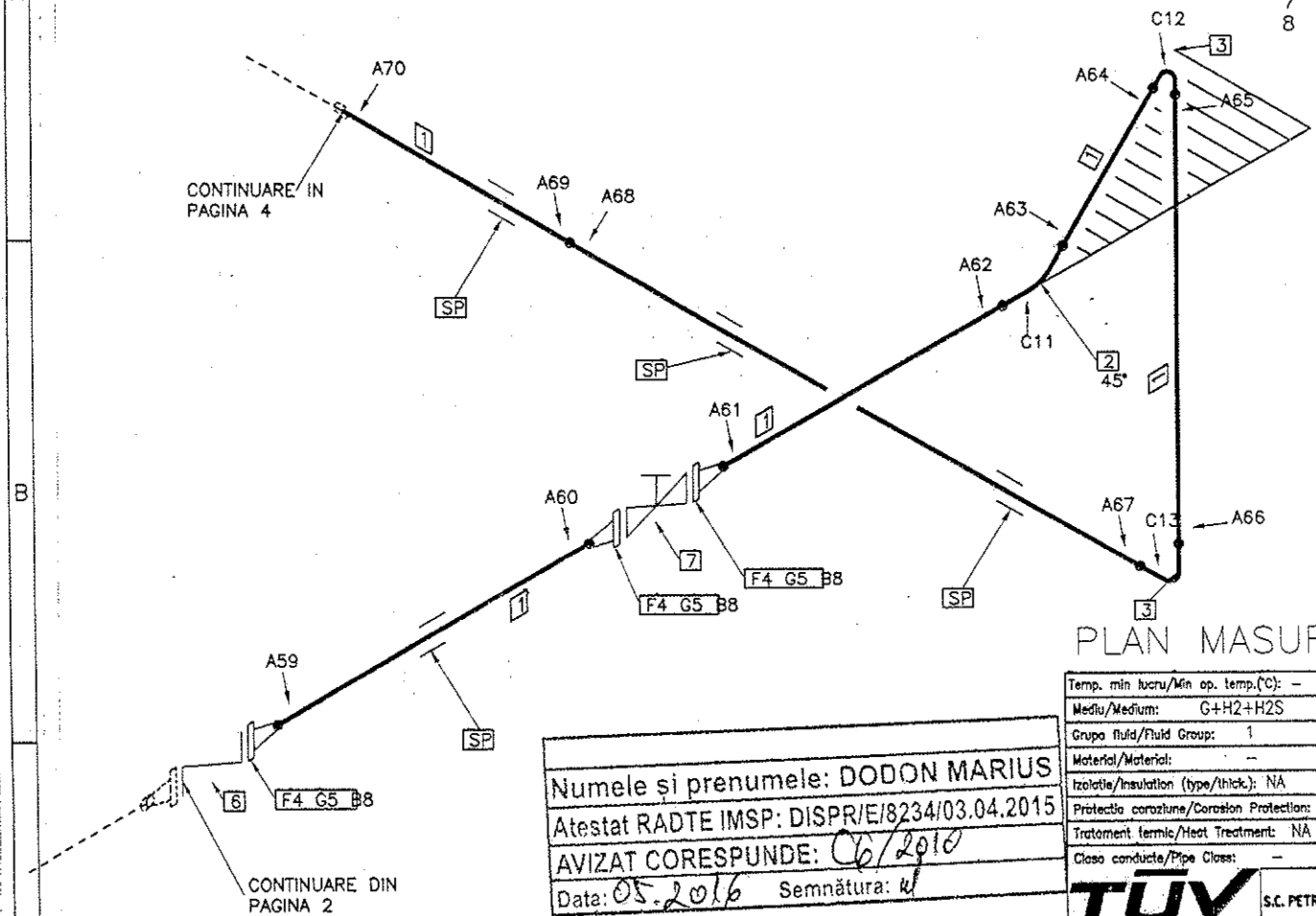
Scara/Scale: NTS

SIS 41-06-EF-2,5,6,006,007,010,020,21,N-06-EF-002,004,012,013,014,015,016,017,018 pag/pag 2 din/from 26

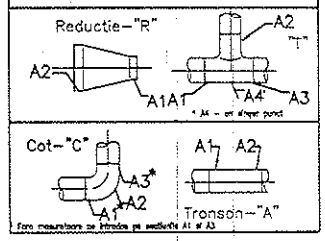
Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Ninca N.

PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	16.9 M
2	Cot 45	150	1
3	Cot 90	150	2
4	Flansa cu gat Dn150(ø168,3x–)/Pn25/B2	150	3
5	Garnitura Dn150/Pn25/B2	150	3
6	RRCF Dn150/ PN25/B2	150	1
7	RSF Dn150/ PN25/B2	150	1
8	Prezoane cu 2 piulite	M24x130	4/48



POZITIA PUNCTELOR DE CONTROL
PENTRU MASURAREA GROSIMII PERETILOR CU UTg



LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

PLAN MASURATORI GROSIMI

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

Numele și prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: 06/2016
Data: 05.2016 Semnătura:

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA		
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100	
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –	
Material/Material: –	% control nedistructiv/Nondestructiv test: 25%-RT/UT 25%-PT/MT	Mediu proba/Test medium: Apa	
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –	
Protectia corozione/Corrosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –	
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100	
Clasa conducte/Pipe Class: –	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facla	

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 Judet Prahova

LUKOIL OILCOMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Proiect-Nr/Project-No						Desen-Nr/Drawing-No								Rev/Rev	
16-287/PEVIT						ANEXA 3								00	
17	18	19	20	21	22	23	30	31							
Cod Instalatie/Plant Code						Orig.Plan									

Intreprindere/Client: PETROTEL–LUKOIL

Instalatie/Plant: HPM

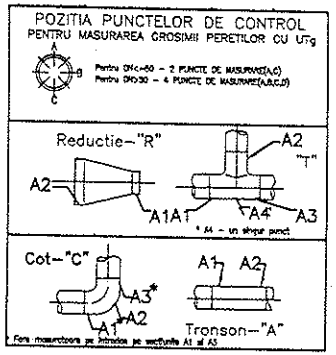
Scara/Scale: NTS

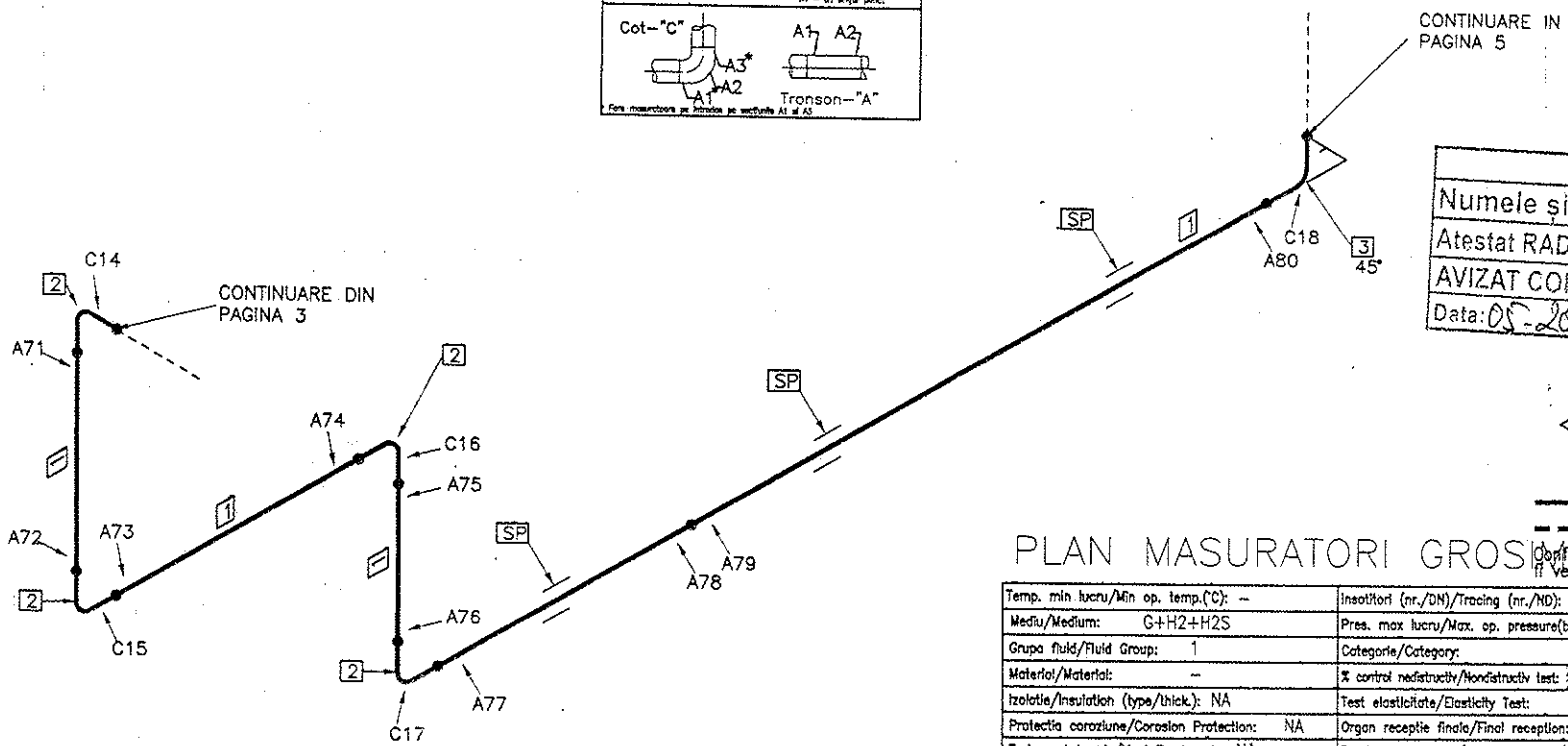
Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea I.	Ninca N.

SIS 41–06–EF–2,5,6,006,007,010,020,21,N–06–EF–002,004,012,013,014,015,016,017,018

PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	14.4 M
2	Cot 90	150	4
3	Cot 45	150	1





Numele și prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: 06/2010
Data: 05-2016 Semnătura:

LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

PLAN MASURATORI GROSIMI

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%-RT/UT 25%-PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia corozione/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100
Clasa conducte/Pipe Class: –	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti
Str. Mihai Bravu, nr.235
Judet Prahova

LUKOIL OIL COMPANY

Proiect-Nr/Project-No	Desen-Nr/Drawing-No	Rev/Rev
16-287/PEVIT	ANEXA 3	00

Cod Instalatie/Plant Code | Orig.Plan

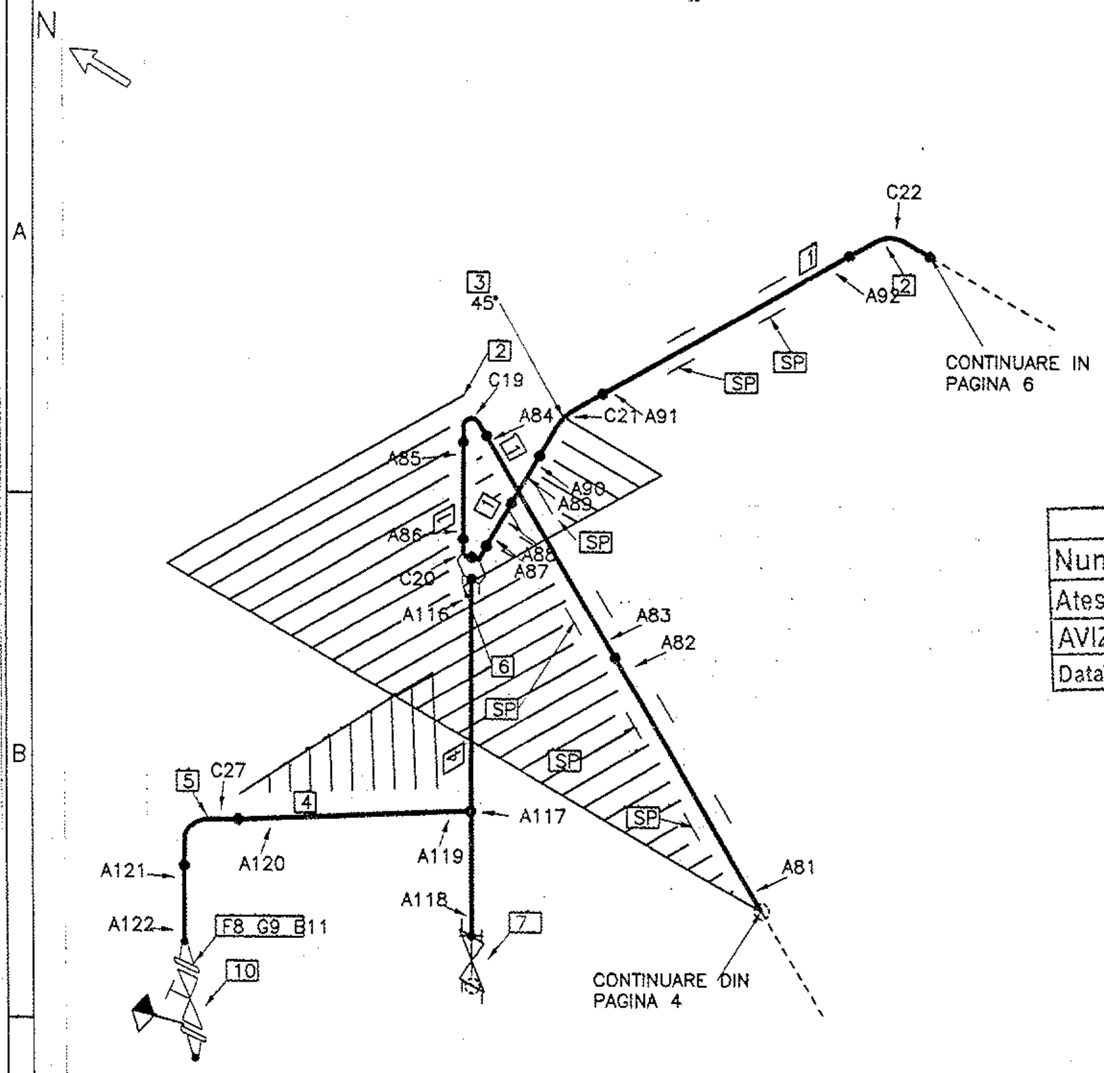
Intreprindere/Client: PETROTEL-LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
.00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Ninca N.

SIS 41-06-EF-2,5,6,006,007,010,020,21,N-06-EF-002,004,012,013,014,015,016,017,018



PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	27 M
2	Cot 90	150	3
3	Cot 45	150	1
4	Teava	20	24.3 M
5	Cot 90	20	1
6	Elbolet	150x20	1
7	RSMS Dn20/Pn160	20	1
8	Flansa cu gat Dn20(ø26,9x–)/Pn25/B2	20	1
9	Garnitura Dn20/Pn25/B2	20	1
10	RSF Dn20/ PN25/B2	20	1
11	Prezoane cu 2 piulite	M12x80	4/8

POZITIA PUNCTELOR DE CONTROL PENTRU MASURAREA GROSIMII PERETILOR CU UTg

Pentru DN<=50 – 2 PUNCTE DE MASURARE(A,C)
Pentru DN>50 – 4 PUNCTE DE MASURARE(A,B,C,D)

Reductie–"R" | "T" | Cot–"C" | Tronson–"A"

Numele si prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: C6/2010
Data: 05-2016 Semnătura: [signature]

LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max. op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%-RT/UIS 25%-FT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C): 100
Clasa conducta/Pipe Class: –	de la /from: 06–K1; 06–K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 Judet Prahova

LUKOIL OIL COMPANY

1 2 3 4 5 6	7 8 9 10 11 12 13 14 15 16	
Proiect-Nr/Project-No	Desen-Nr/Drawing-No	Rev/Rev
16-287/PEVIT	ANEXA 3	00
17 18 19 20 21 22	23 30 31	
Cod Instalatie/Plant Code	Orig.Plan	

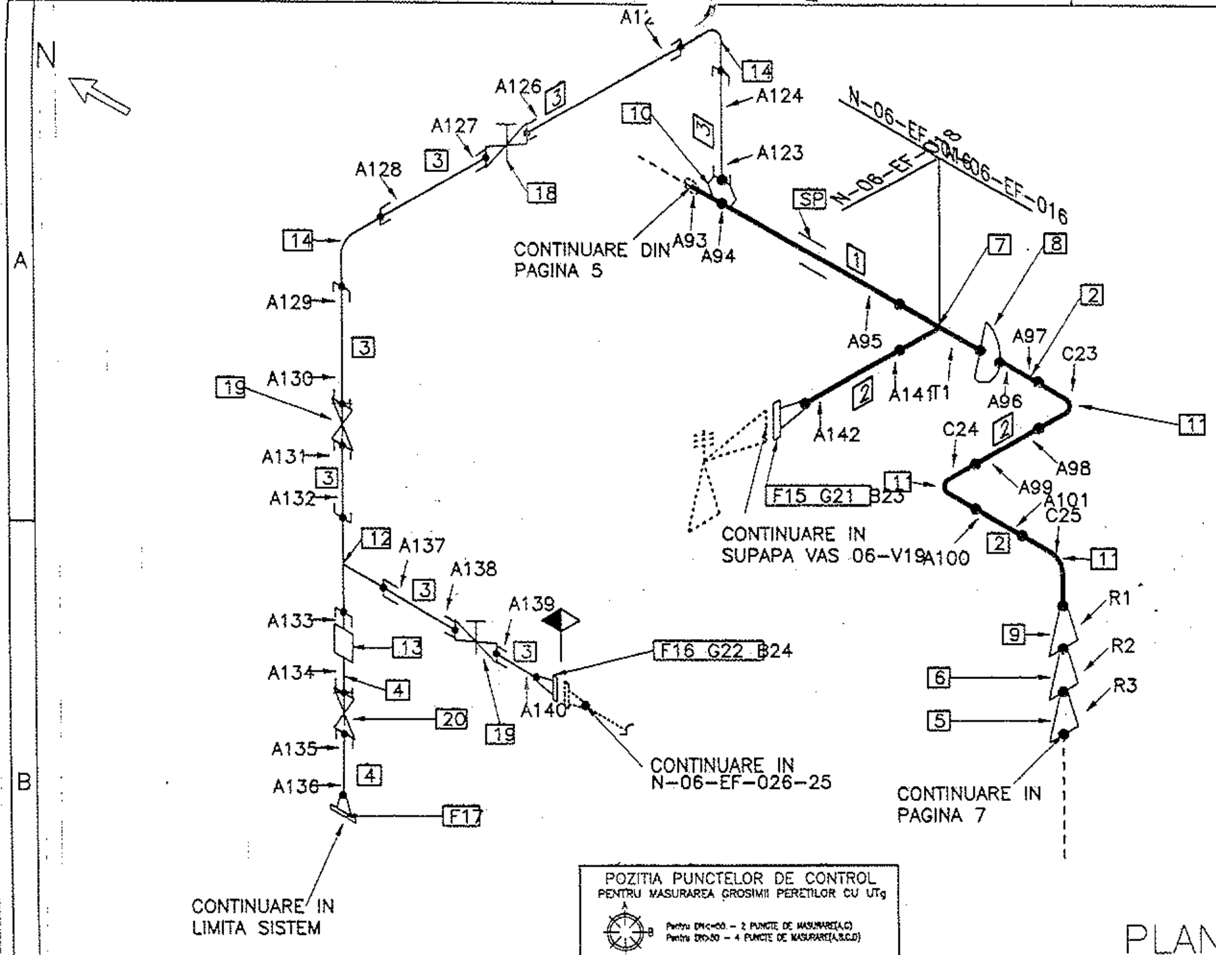
Intreprindere/Client: PETROTEL–LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

SIS 41–06–EF–2,5,6,006,007,010,020,21,N–06–EF–002,004,012,013,014,015,016,017,018 pag/pag 5 din/from 26

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea [signature]	Ninca N. [signature]



PIESE DE CONDUCTE - LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	2.0 M
2	Teava	100	4 M
3	Teava	25	5.4 M
4	Teava	20	0.2 M
5	Reductie concentrica	300X200	1
6	Reductie concentrica	200X150	1
7	Teu redus	150X100	1
8	CAPAC SUDAT	150	1
9	Reductie concentrica	150X100	1
10	Sockolet	150X25	1
11	Cot 90	100	3
12	Teu egal mufa soclu	25X25	1
13	MUFA FILETATA	25X20	1
14	Cot mufa soclu	25	2
15	Flansa cu gat Dn100(ø114,3x-)/Pn25/B2	100	1
16	Flansa cu gat Dn25(ø33,7x-)/Pn25/B2	25	1
17	Flansa cu gat Dn20(ø26,9x-)/Pn25/B2	20	1
18	RVMS Dn25/Pn160	25	1
19	RSMS Dn25/Pn160	25	2
20	RSMS Dn20/Pn160	20	1
21	Garnitura Dn100/Pn25/B2	100	1
22	Garnitura Dn25/Pn25/B2	25	1
23	Prezoane cu 2 piulite	M20x110	8/16
24	Prezoane cu 2 piulite	M12x80	4/8

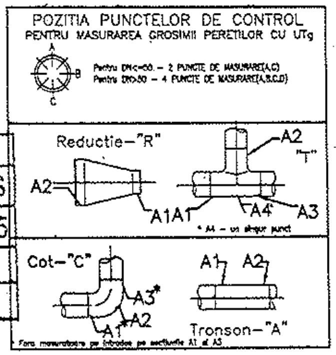
LEGENDA:

-limita sistem

-conducta existenta supusa examinarii

-conducta existenta in afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.



Numele si prenumele: DODON MARIUS

Atestat RADTE IMSP: DISPR/E/8234/03.04.2015

AVIZAT CORESPUNDE: C6/2010

Data: 05.2016 Semnătura:

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): -	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: -
Material/Material: -	% control nedistructiv/Nondestructiv test: 25%-RT/UTs 25%-PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: -	Presiune proba/Test pressure(bar): -
Protectia coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: -	Diagrama P&I/P&ID No.: -
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C): 100
Clasa conducta/Pipe Class: -	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 Judet Prahova

LUKOIL OIL COMPANY

Proiect-Nr/Project-No	Desen-Nr/Drawing-No	Rev/Rev
16-287/PEVIT	ANEXA 3	00

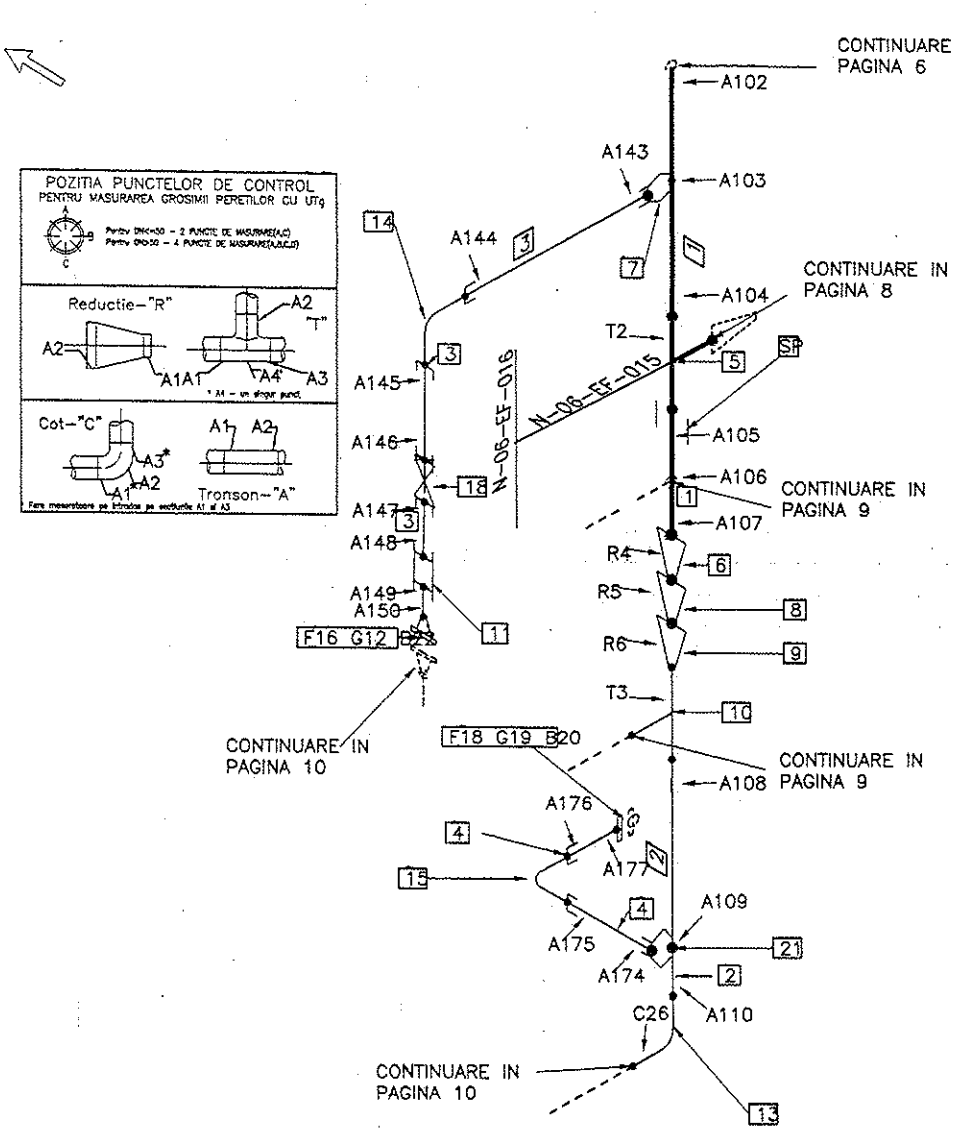
Intreprindere/Client: PETROTEL-LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

SIS 41-06-EF-2,5,6,006,007,010,020,21,N-06-EF-002,004,012,013,014,015,016,017,018 pag/pag 6 din/from 26

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea	Ninca N.



PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	300	1.5 M
2	Teava	50	0.55 M
3	Teava	25	3.7 M
4	Teava	20	0.5 M
5	Teu egal	300X300	1
6	Reductie concentrica	300X150	1
7	Sockolet	300X25	1
8	Reductie concentrica	150X80	1
9	Reductie concentrica	80X50	1
10	Teu egal	50X50	1
11	PRMS	50X25	1
12	Garnitura Dn50/Pn25/B2	50	1
13	Cot 90	50	1
14	Cot mufa soclu	25	1
15	Cot mufa soclu	20	1
16	Flansa cu gat Dn50(ø60,3x-)/Pn25/B2	50	1
17	Flansa SLIP-ON Dn20/Pn25/B2	20	1
18	RSMS Dn25/Pn160	25	1
19	Garnitura Dn20/Pn25/B2	20	1
20	Prezoane cu 2 piulite	M12X80	4/8
21	Sockolet	50x20	1
22	Prezoane cu 2 piulite	M16X90	4/8

Numele și prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: C6/2010
Data: 05.2016 Semnătura:

LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA		
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100	
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –	
Material/Material: –	% control nedistructiv/Nondistructiv. test: 25%-RT/UT; 25%-PT/MT	Mediu proba/Test medium: Apa	
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –	
Protectia corozIune/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –	
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C): 100	
Clasa conducte/Pipe Class: –	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facia	

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti
Str. Mihai Bravu, nr.235
Judet Prahova

LUKOIL OIL COMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Proiect-Nr/Project-No						Desen-Nr/Drawing-No								Rev/Rev	
-PGVZB7/PEVIT						ANEXA 3								00	

17	18	19	20	21	22	23	30	31
Cod Instalatie/Plant Code							Orig.Plan	

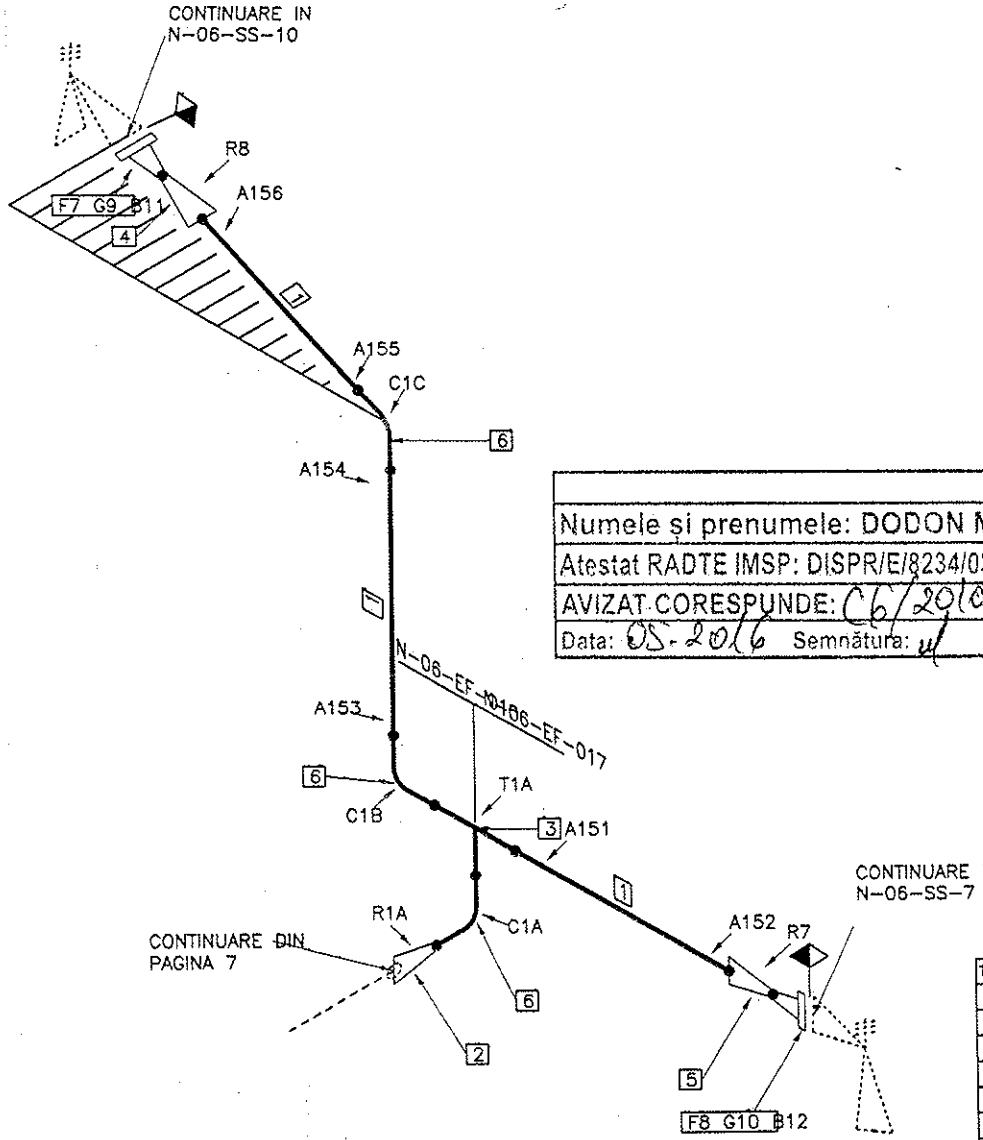
Intreprindere/Client: PETROTEL-LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Ninca N.

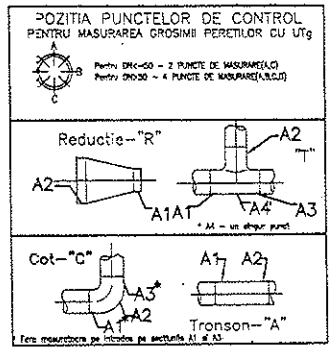
SIS 41-06-EF-2,5,6,006,007,010,020,21,N-06-EF-002,004,012,013,014,015,016,017,018 pag/pag 7 din/from 26



Numele și prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: C6/2010
Data: 05.2016 Semnătura:

PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	3.7 M
2	Reductie concentrica	300X150	1
3	Teu egal	150X150	1
4	Reductie concentrica	150X100	1
5	Reductie concentrica	150X80	1
6	Cot 90	150	3
7	Flansa cu gat Dn100(ø114,3x–)/Pn25/B2	100	1
8	Flansa cu gat Dn80(ø88,9x–)/Pn25/B2	80	1
9	Garnitura Dn100/Pn25/B2	100	1
10	Garnitura Dn80/Pn25/B2	80	1
11	Prezoane cu 2 piulite	M20x110	8/16
12	Prezoane cu 2 piulite	M16x100	8/16



LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA		
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15		Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group:	Categorie/Category: III		Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%-RT/UT 25%-PT/MT		Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –		Presiune proba/Test pressure(bar): –
Protectia coraziune/Corrosion Protection: NA	Organ receptie finala/Final reception: –		Diagrama P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15		Temp. de proiectare/Design temp.(°C):100
Clasa conducta/Pipe Class: –	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facla	

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti
Str. Mihai Bravu, nr.235
Judet Prahova

LUKOIL OIL COMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Proiect-Nr/Project-No						Desen-Nr/Drawing-No								Rev/Rev	
16-287/PEVIT						ANEXA 3								00	

17	18	19	20	21	22	23	30	31
Cod Instalatie/Plant Code							Orig.Plan	

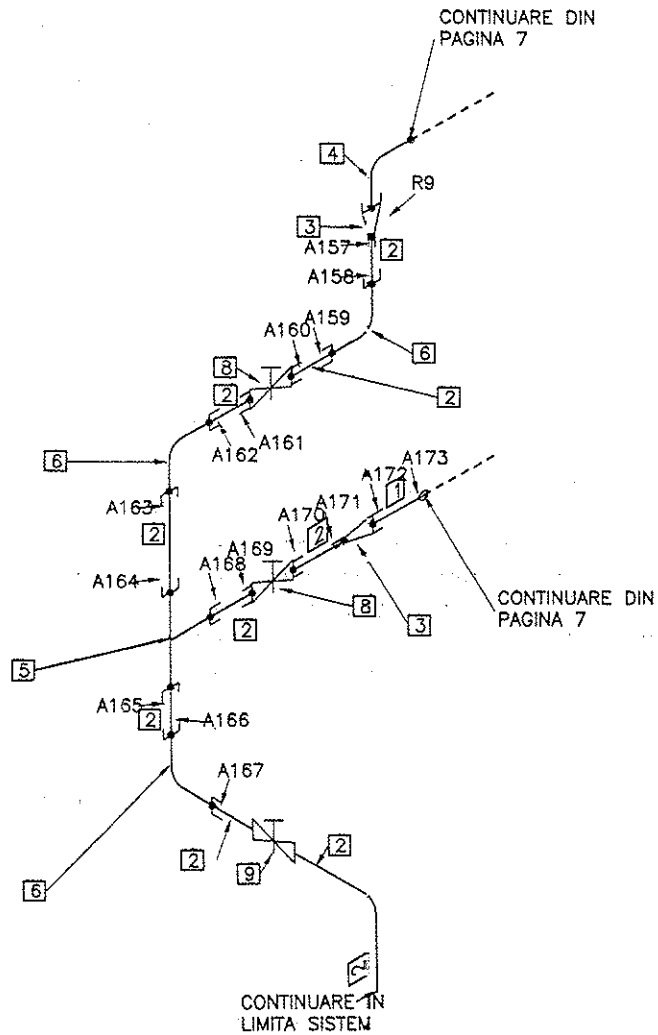
Intreprindere/Client: PETROTEL-LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

SIS 41-06-EF-2,5,6,006,007,010,020,21,N-06-EF-002,004,012,013,014,015,016,017,018 pag/pag 8 din/from 26

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Nimca N.

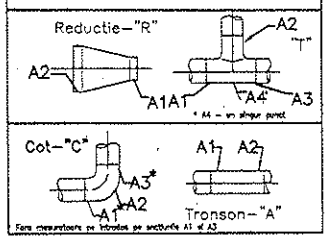


PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	50	0.1 M
2	Teava	20	1.7 M
3	PRMS	50X20	2
4	Cot 90	50	1
5	Teu egal mufa soclu	20X20	1
6	Cot mufa soclu	20	3
8	RSMS Dn20/Pn160	20	2
9	ROBINET FILETAT Dn20/Pn160	20	1

Numele și prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: C6/2010
Data: 05.2016 Semnătura:

POZITIA PUNCTELOR DE CONTROL PENTRU MASURAREA GROSIMII PERETILOR CONDUCTA



LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

PLAN MASURATORI GROSIMI

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%-RT/UT; 25%-PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100
Clasa conducte/Pipe Class: –	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 Judet Prahova

LUKOIL OILCOMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Proiect-Nr/Project-No	Desen-Nr/Drawing-No	Rev/Rev
16-287/PEVIT	ANEXA 3	00

17	18	19	20	21	22	23	30	31

Cod Instalatie/Plant Code | Orig.Plan

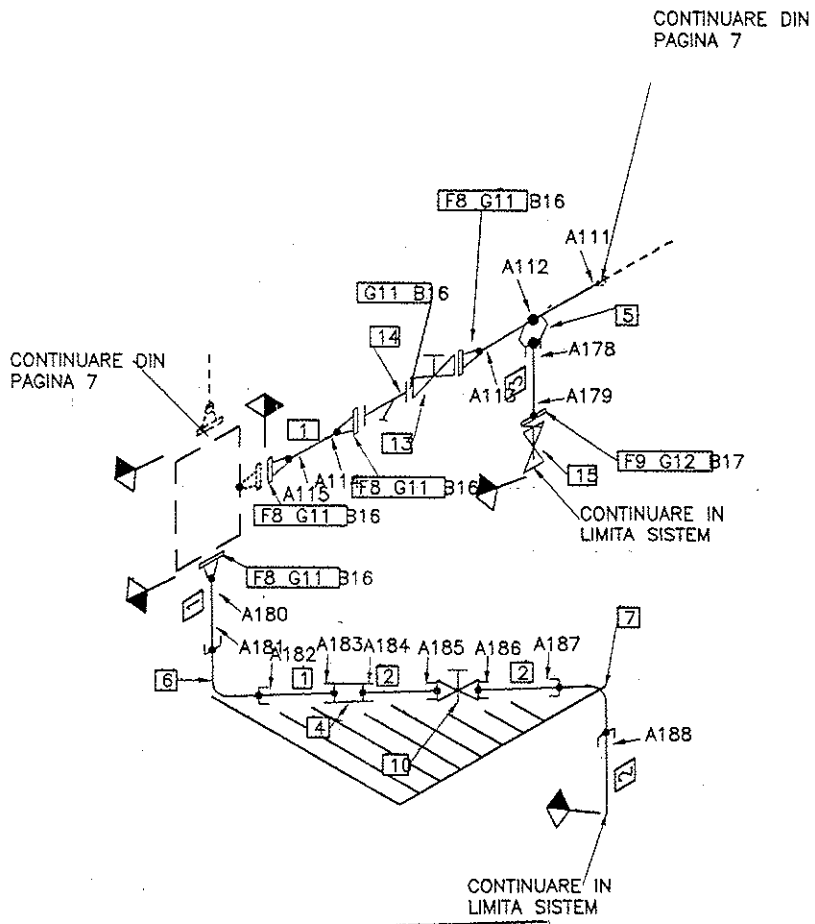
Intreprindere/Client: PETROTEL-LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

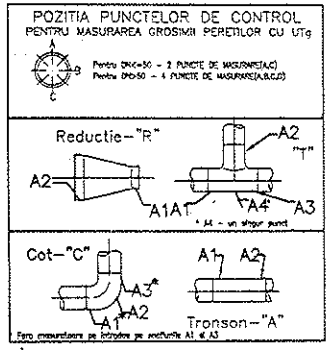
SIS 41-06-EF-2,5,6,006,007,010,020,21,N-06-EF-002,004,012,013,014,015,016,017,018 pag/pag 9 din/from 26

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Ninca N.



PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	50	1.15 M
2	Teava	40	0.55 M
3	Teava	25	0.1 M
4	PRMS	50X40	1
5	Sockolet	50X25	1
6	Cot mufa soclu	50	1
7	Cot mufa soclu	40	1
8	Flansa cu gat Dn50(ø60,3x–)/Pn25/B2	50	4
9	Flansa SLIP–ON Dn25/Pn25/B2	25	1
10	RSMS Dn40/Pn160	40	1
11	Garnitura Dn50/Pn25/B2	50	5
12	Garnitura Dn25/Pn25/B2	25	1
13	RSF Dn25/ PN25/B2	50	1
14	FILTRU TIP Y	50	1
15	RVF Dn25/PN25/B2	25	1
16	Prezoane cu 2 piulite	M16x90	20/40
17	Prezoane cu 2 piulite	M16x90	4/8



LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

PLAN MASURATORI GROSIMI

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: ZSA–RT/UTs ZSA–PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia corozione/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100
Clasa conducte/Pipe Class: –	de la /from: 06–K1; 06–K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 judet Prahova

LUKOIL OIL COMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Proiect-Nr/Project-No						Desen-Nr/Drawing-No								Rev/Rev	
16-287/PEVIT						ANEXA 3								00	

17	18	19	20	21	22	23	30	31
Cod Instalatie/Plant Code							Orig.Plan	

Intreprindere/Client: PETROTEL–LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

SIS 41–06–EF–2,5,6,006,007,010,020,21,N–06–EF–002,004,012,013,014,015,016,017,018

pag/pag 10 din/from 26

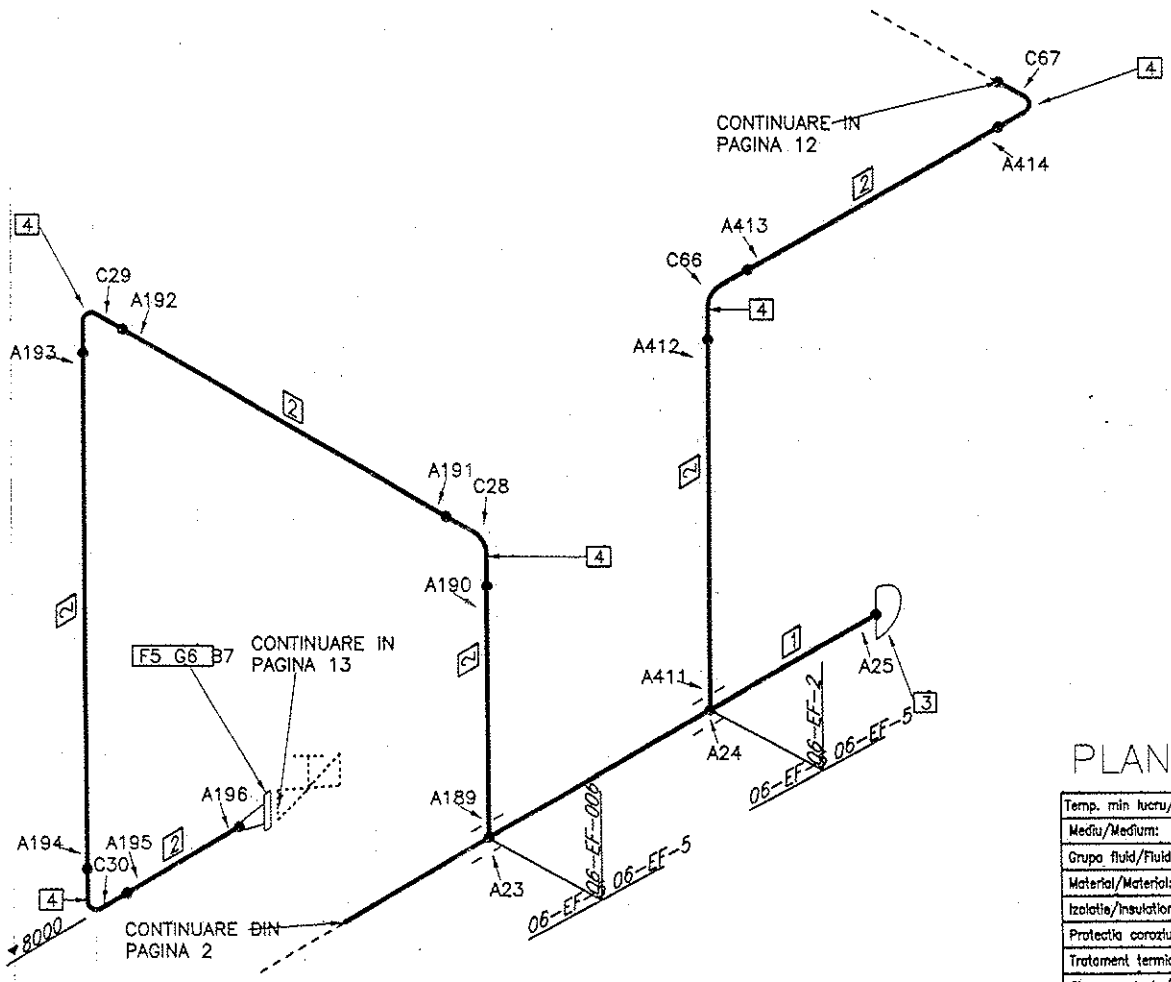
Numele și prenumele: DODON MARIUS

Atestat RADTE IMSP: DISPR/E/8234/03.04.2015

AVIZAT CORESPUNDE: 06/2016

Data: 05.2016 Semnătura:

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Ninca N.

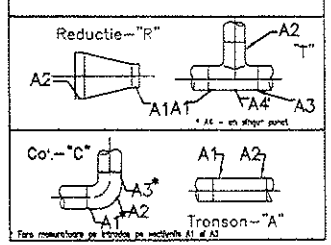


PIESE DE CONDUCTE – LISTA DE PIESE

Pcz	Descriere	DN	Cantitate
1	Teava	250	1.8 M
2	Teava	150	8.9 M
3	Capac sudat	250	1
4	Cot 90	150	5
5	Flansa cu gat Dn150(ø168,3x–)/Pn25/B2	150	1
6	Garnitura Dn150/Pn25/B2	150	1
7	Prezoane cu 2 piulite	M24x130	8/16

Numele și prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: C6/2010
Data: 05.2016 Semnătura:

POZITIA PUNCTELOR DE CONTROL PENTRU MASURAREA GROSIMII PERETILOR CU UTg



LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

PLAN MASURATORI GROSIMI

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 20%-RT/US 20%-PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100
Clasa conducte/Pipe Class: –	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 judet Prahova

LUKOIL OIL COMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Proiect-Nr/Project-No: 16-287/PEVIT
Desen-Nr/Drawing-No: ANEXA 3
Rev/Rev: 00

17	18	19	20	21	22	23	30	31

Cod Instalatie/Plant Code | Orig.Plan

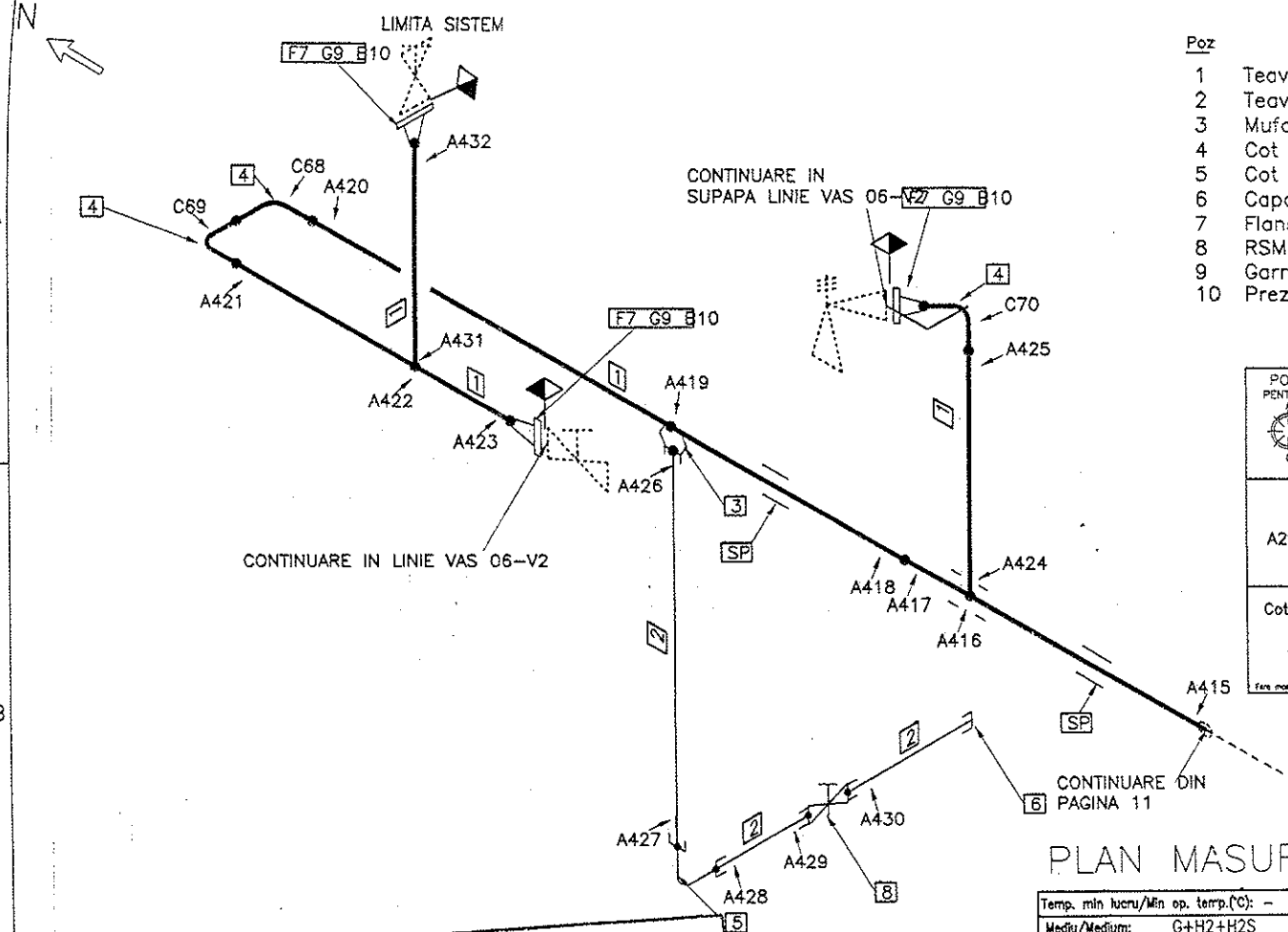
Intreprindere/Client: PETROTEL–LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

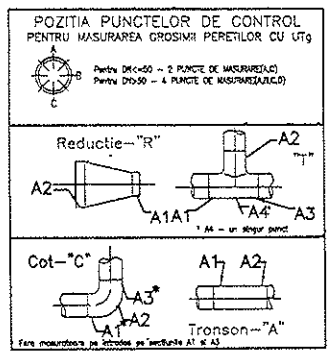
Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea F.	Ninca N.

SIS 41–06–EF–2,5,6,;006,007,010,020,21,N–06–EF–002,004,012,013,014,015,016,017,018



PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	8.8 M
2	Teava	25	0.7 M
3	Mufa soclu	150X25	1
4	Cot 90	150	3
5	Cot mufa soclu	25	1
6	Capac filetat	25	1
7	Flansa cu gat Dn150(ø168,3x–)/Pn25/B2	150	3
8	RSMS Dn150/Pn160	25	1
9	Garnitura Dn150/Pn25/B2	150	3
10	Prezoane cu 2 piulite	M24x130	24/48



LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%-RT/UTs 25%-PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama PØd/PØdD No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100
Clasa conducte/Pipe Class: –	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facia

Numele și prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: C6/2010
Data: 05.2016 Semnătura:

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 Judet Prahova

LUKOIL OIL COMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Proiect-Nr/Project-No	Desen-Nr/Drawing-No	Rev/Rev
16-287/PEVIT	ANEXA 3	00

17	18	19	20	21	22	23	30	31

Cod Instalatie/Plant Code | Orig.Plan

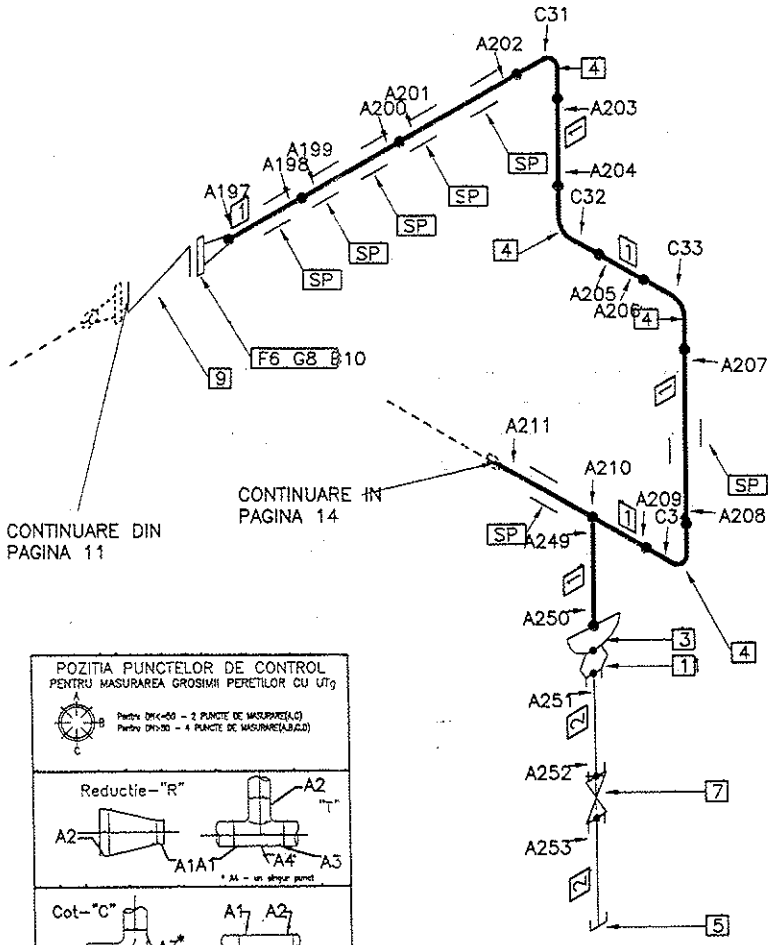
Intreprindere/Client: PETROTEL-LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

SIS 41-06-EF-2,5,6,005,007,010,020,21,N-06-EF-002,004,012,013,014,015,016,017,018

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea	Ninca N.

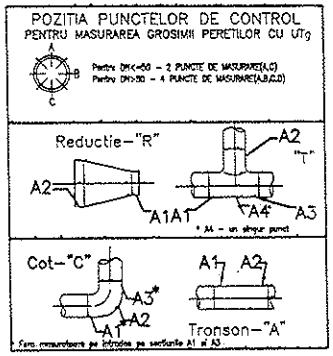


PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	32.9 M
2	Teava	20	0.3 M
3	Capac sudat	150	1
4	Cot 90	150	4
5	Capac filetat	20	1
6	Flansa cu gat Dn150(ø168,3x–)/Pn25/B2	150	1
7	RSMS Dn20/Pn160	20	1
8	Garnitura Dn150/Pn25/B2	150	1
9	RRCF Dn150/ PN25/B2	150	1
10	Prezoane cu 2 piulite	M24x130	8/16
11	Sockolet	150X20	1

Numele și prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: 6/2010
Data: 05.2016 Semnătura:

POZITIA PUNCTELOR DE CONTROL
PENTRU MASURAREA GROSIMII PERETILOR CU UTg



LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

PLAN MASURATORI GROSIME

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondestructiv test: ZSK-RT/UTs ZSK-PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia corozIune/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100
Clasa conducte/Pipe Class: –	de la /from: 06–K1; 06–K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti
Str. Mihai Bravu, nr.235
Judet Prahova

LUKOIL OIL COMPANY

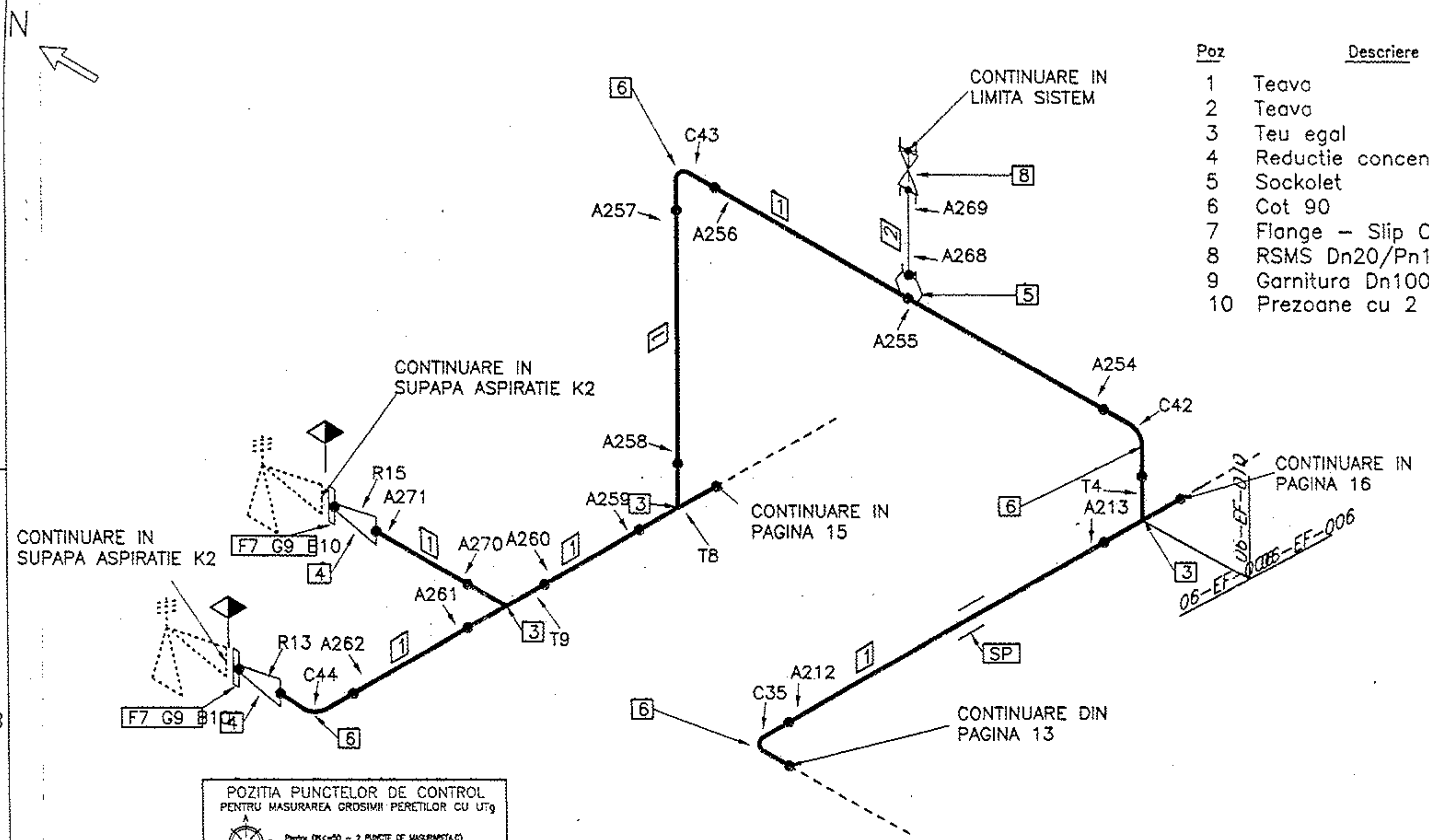
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Proiect-Nr/Project-No						Desen-Nr/Drawing-No								Rev/Rev	
16–287/PEVIT						ANEXA 3								00	

17	18	19	20	21	22	23	30	31
Cod Instalatie/Plant Code							Orig.Plan	

Intreprindere/Client: PETROTEL–LUKOIL
Instalatie/Plant: HPM
Scara/Scale: NTS

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea	Ninca

SIS 41–06–EF–2,5,6,006,007,010,020,21,N–06–EF–002,004,012,013,014,015,016,017,018

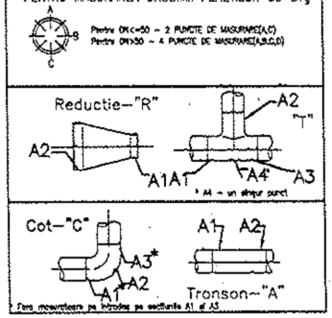


PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	8.4 M
2	Teava	20	0.2 M
3	Teu egal	150X150	3
4	Reductie concentrica	150X100	2
5	Sockolet	150X20	1
6	Cot 90	150	4
7	Flange – Slip On Dn100(ø114,3x–)/Pn25/B2	100	2
8	RSMS Dn20/Pn160	20	1
9	Garnitura Dn100/Pn25/B2	100	2
10	Prezoane cu 2 piulite	M20x110	16/32

Numele si prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: C6/2010
Data: 05.2016 Semnătura:

POZITIA PUNCTELOR DE CONTROL
PENTRU MASURAREA GROSIMII PERETILOR CU UTg



LEGENDA:

- –limita sistem
- –conducta existenta supusa examinarii
- –conducta existenta in afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%-RT/UTS 25%-PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectie coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100
Clasa conducte/Pipe Class: –	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A.
Ploiesti
Str. Mihai Bravu, nr.235
Judet Prahova

LUKOIL OIL COMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	30	31							

Proiect-Nr/Project-No	Desen-Nr/Drawing-No	Rev/Rev
16-287/PEVIT	ANEXA 3	00

Cod Instalatie/Plant Code | Orig.Plan

Intreprindere/Client: PETROTEL-LUKOIL
Instalatie/Plant: HPM
Scara/Scale: NTS

SIS 41-06-EF-2,5,6,006,007,010,020,21,N-06-EF-002,004,012,013,014,015,016,017,018

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
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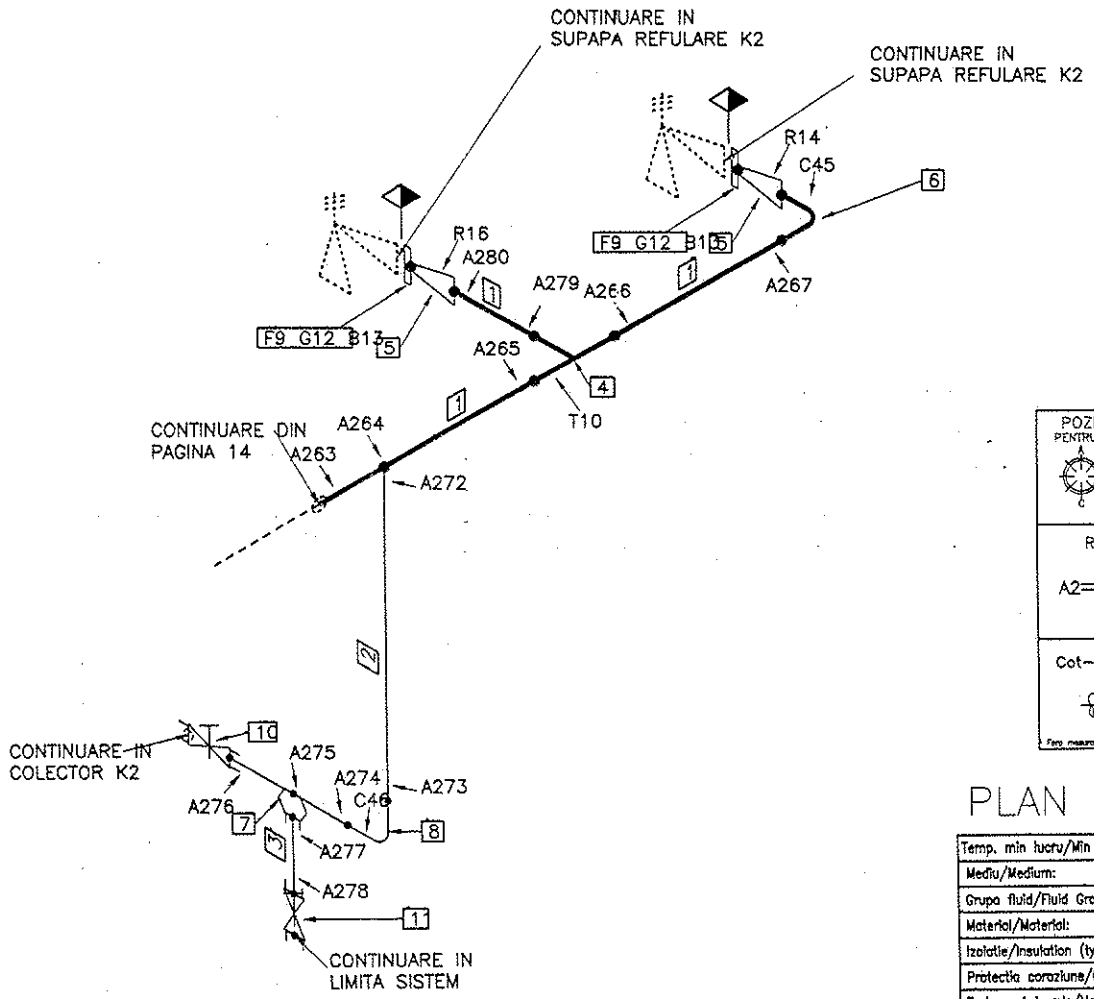
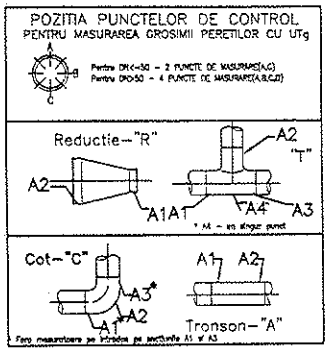
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Ninca N.



PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	6.4 M
2	Teava	50	0.6 M
3	Teava	20	0.1 M
4	Teu egal	150X150	1
5	Reductie concentrica	150X100	2
6	Cot 90	150	1
7	Sockolet	50X20	1
8	Cot 90	50	1
9	Flange – Slip On Dn100/Pn25/B2	100	2
10	RVFMS Dn50/Pn160	50	1
11	RSMS Dn20/Pn160	20	1
12	Garnitura Dn100/Pn25/B2	100	2
13	Prezoane cu 2 piulite	M20x110	16/32



Numele și prenumele: DODON MARIUS

Atestat RADTE IMSP: DISPR/E/8234/03.04.2015

AVIZAT CORESPUNDE: C6/2910

Data: 05.2016 Semnătura:

LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondestructiv test: 25%-RT/UT 25%-PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100
Clasa conducte/Pipe Class: –	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facia

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 Judet Prahova

LUKOIL OIL COMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Proiect-Nr/Project-No	Desen-Nr/Drawing-No	Rev/Rev
16-287/PEVIT	ANEXA 3	00

17	18	19	20	21	22	23	30	31
Cod Instalatie/Plant Code							Orig.Plan	

Intreprindere/Client: PETROTEL–LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

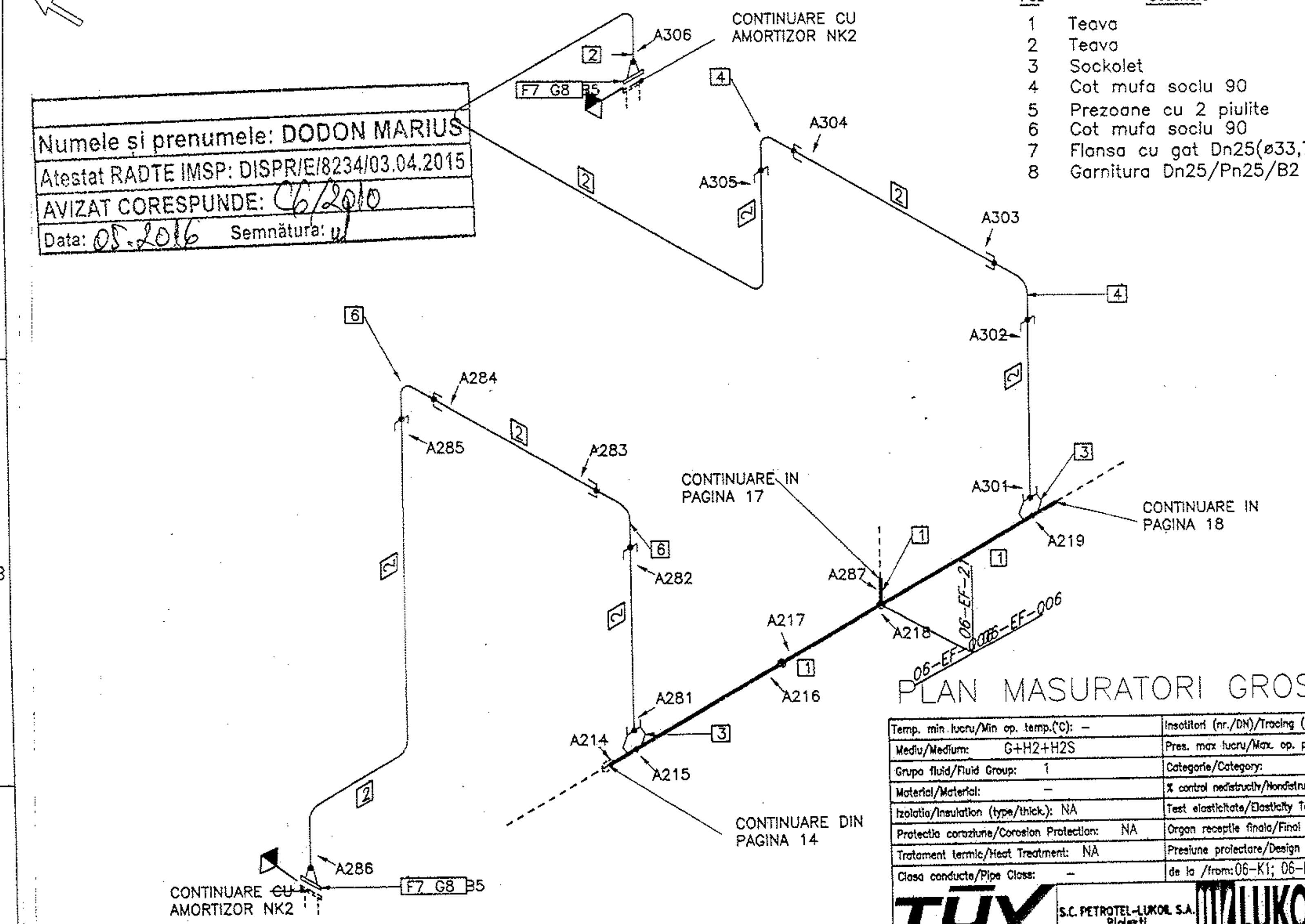
SIS 41–06–EF–2,5,6,006,007,010,020,21,N–06–EF–002,004,012,013,014,015,016,017,018

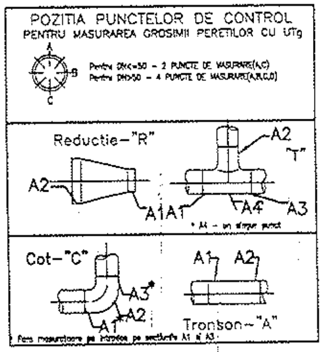
Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Ninca N.

PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	5.1 M
2	Teava	25	21.4 M
3	Sockolet	150X25	2
4	Cot mufa soclu 90	25	2
5	Prezoane cu 2 piulite	M12x80	8/16
6	Cot mufa soclu 90	25	2
7	Flansa cu gat Dn25(ø33,7X–)/Pn25/B2	25	2
8	Garnitura Dn25/Pn25/B2	25	2

Numele si prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: C6/2010
Data: 05.2016 Semnătura:





LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%-RI/UIs 25%-PT/MT	Mediu proba/Test medium: Apa
Izolatia/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C): 100
Clasa conducta/Pipe Class: –	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 Judet Prahova

LUKOIL OIL COMPANY

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 30 31

Proiect-Nr/Project-No	Desen-Nr/Drawing-No	Rev/Rev
16-287/PEVIT	ANEXA 3	00

Cod Instalatie/Plant Code | Orig.Plan

Intreprindere/Client: PETROTEL–LUKOIL

Instalatie/Plant: HPM

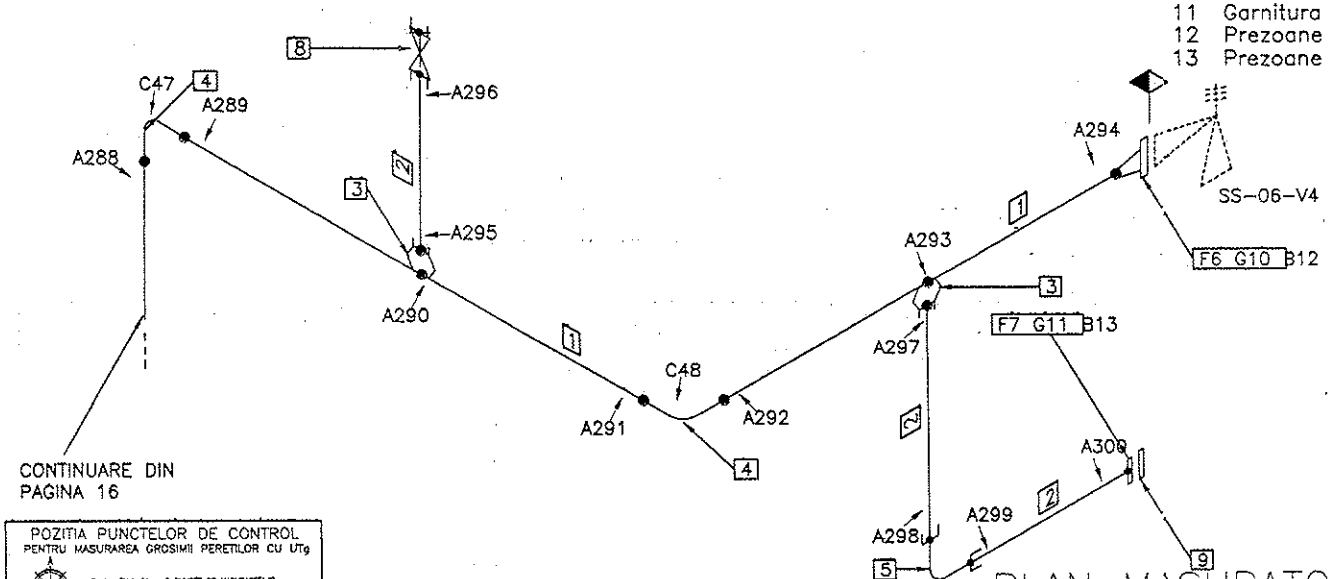
Scara/Scale: NTS

SIS 41-06-EF-2,5,6,006,007,010,020,21,N-06-EF-002,004,012,013,014,015,016,017,018

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Ninca N.

PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	7.05 M
2	Teava	20	0.7 M
3	Sockolet	150X20	2
4	Cot 90	150	2
5	Cot mufa soclu	20	1
6	Flansa cu gat Dn150(ø168,3x–)/Pn25/B2	150	1
7	Flansa Plata Dn20(ø26,9x–)/Pn25/B2	20	1
8	RSMS Dn20/Pn160	20	1
9	Flansa oarba Dn20(ø26,9x–)/PN25/B2	20	1
10	Garnitura Dn150/Pn25/B2	150	1
11	Garnitura Dn20/Pn25/B2	20	1
12	Prezoane cu 2 piulite	M24x130	8/16
13	Prezoane cu 2 piulite	M12x80	4/8



Numele și prenumele: DODON MARIUS

Atestat RADTE IMSP: DISPR/E/8234/03.04.2015

AVIZAT CORESPUNDE: 6/2010

Data: 05.2016 Semnătura:

LEGENDA:

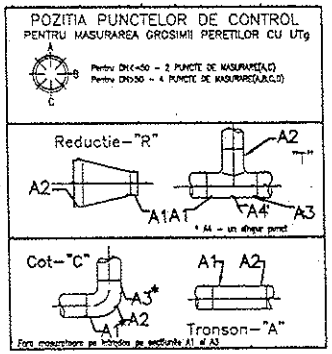
–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

POZITIA PUNCTELOR DE CONTROL
PENTRU MASURAREA GROSIMII PERETILOR CU UTg



PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA		
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100	
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –	
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%-RT/US 25%-PT/MT	Mediu proba/Test medium: Apa	
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –	
Protectia coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –	
Tratament termic/Heat Tractment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100	
Clasa conducte/Pipe Class: –	de la /from: 06–K1; 06–K2; Supape siguranta.	la /to: Colector facla	

TÜV AUSTRIA ROMANIA

S.C. PETROTEL–LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 Judet Prahova

LUKOIL OILCOMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Proiect-Nr/Project-No	Desen-Nr/Drawing-No	Rev/Rev
16-287/PEVIT	ANEXA 3	00

17	18	19	20	21	22	23	30	31

Cod instalatie/Plant Code | Orig.Plan

Intreprindere/Client: PETROTEL–LUKOIL

Instalatie/Plant: HFM

Scara/Scale: NTS

SIS 41–06–EF–2,5,6,006,007,010,020,21,H–06–EF–002,004,012,013,014,015,016,017,018

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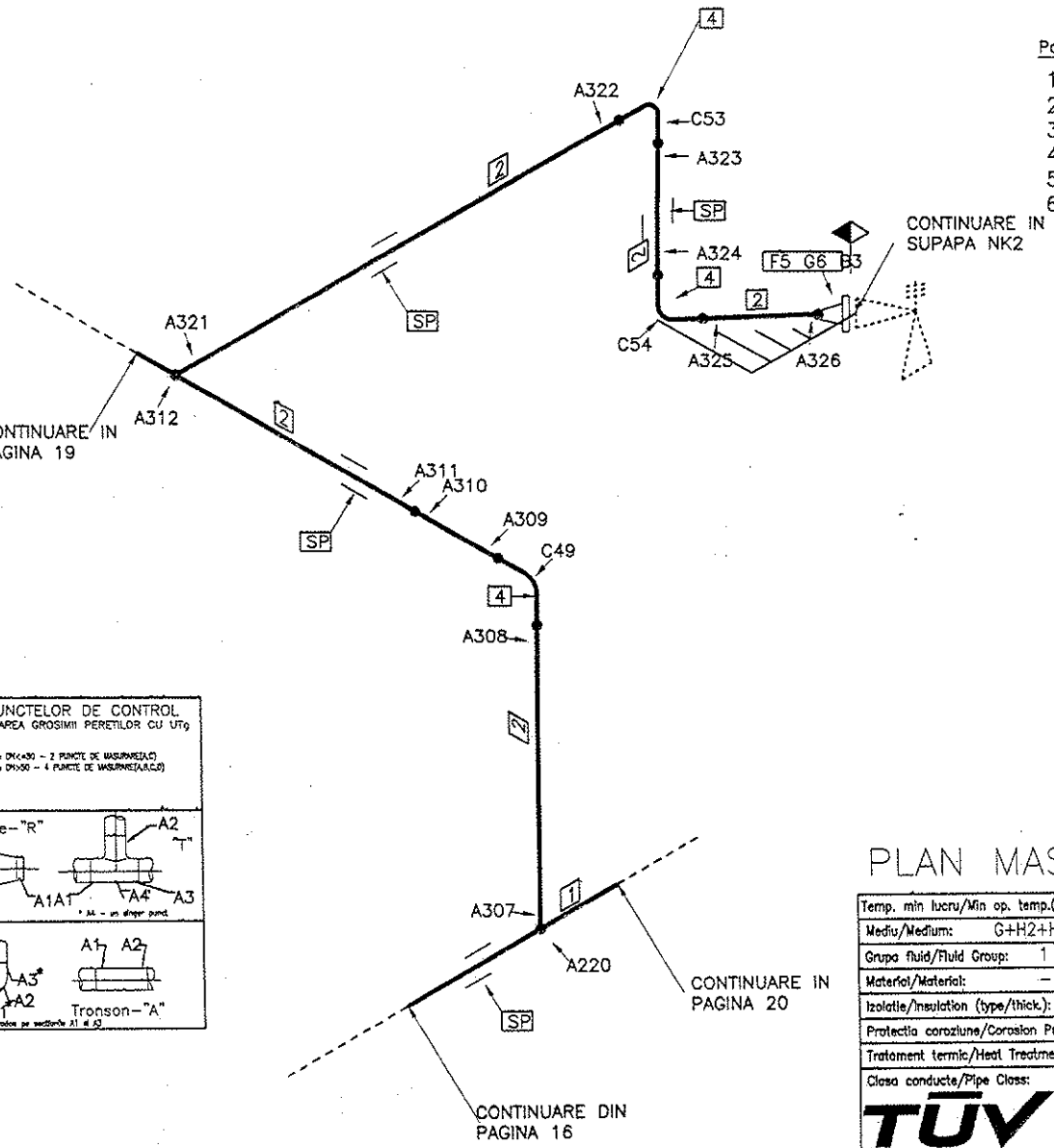
Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Ninca N.



PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	4.7 M
2	Teava	100	14.7 M
3	Prezoane cu 2 piulite	M20x110	8/16
4	Cot 90	100	3
5	Flansa cu gat Dn100(ø114,3x–)/Pn25/B2	100	1
6	Garnitura Dn100/Pn25/B2	100	1

Numele și prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: C6/2010
Data: 05.2016 Semnătura:

POZITIA PUNCTELOR DE CONTROL
PENTRU MASURAREA GROSIMII PERETILOR CU UTg

Pentru DN(<)30 – 2 PUNCTE DE MASURARE(A,C)
Pentru DN(>)50 – 4 PUNCTE DE MASURARE(A,B,C,D)

Reductie–"R"
Cot–"C"
Tronson–"A"
Fara masuratori pe intrados pe sectiunile A1 si A2

LEGENDA:

–limita sistem
–conducta existenta supusa examinarii
–conducta existenta in afara sistemului

Configuratia, componentii si dimensiunile vor fi verificate inainte de examinare.

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insoliteri (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 20%-RT/UT; 25%-PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100
Clasa conducte/Pipe Class: –	de la /from: 06–K1; 06–K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti
Str. Mihai Bravu, nr.235
Judet Prahova

LUKOIL OIL COMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Proiect-Nr/Project-No	Desen-Nr/Drawing-No	Rev/Rev
16-287/PEVIT	ANEXA 3	00

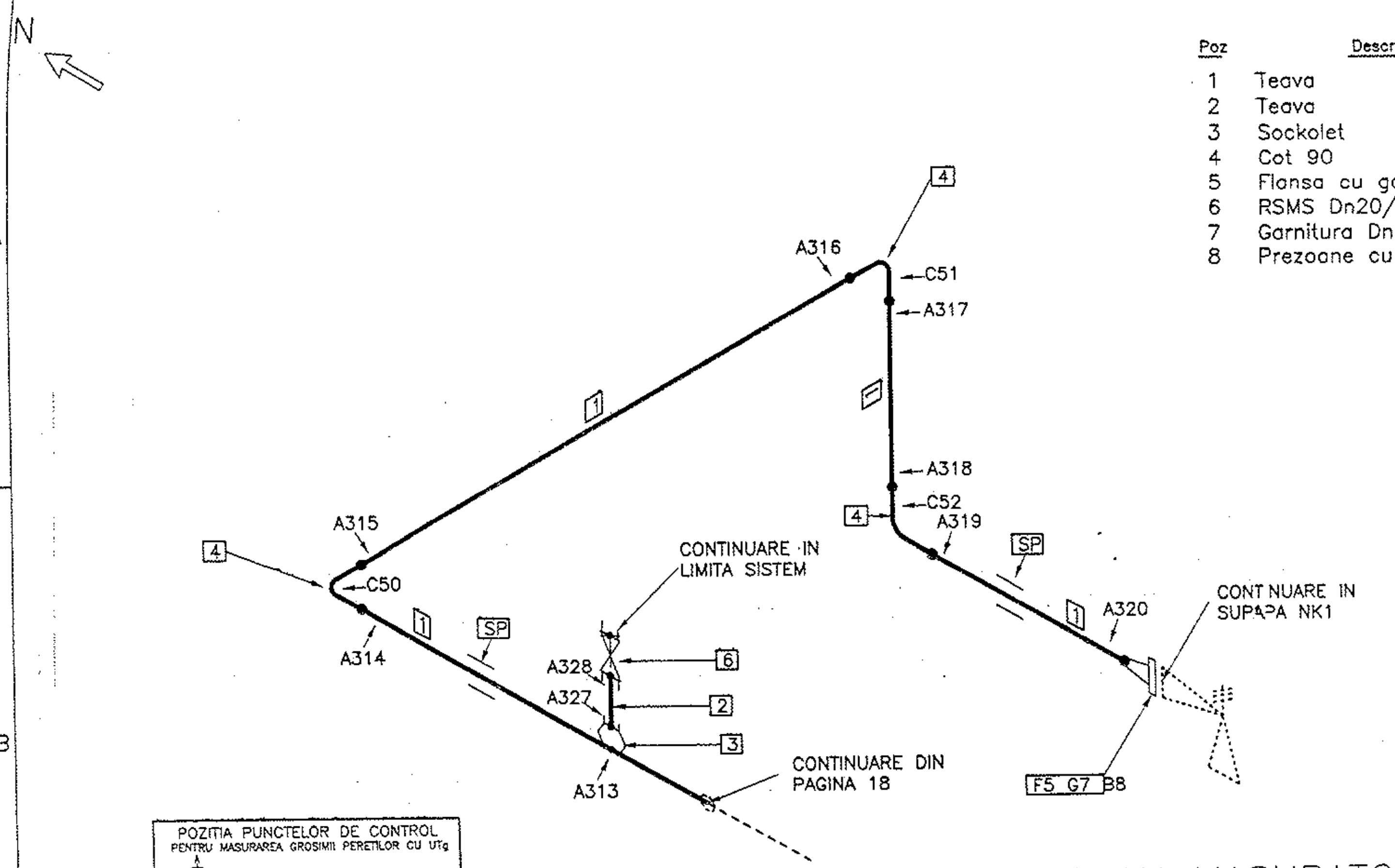
17	18	19	20	21	22	23	30	31

Cod Instalatie/Plant Code	Orig.Plan

Intreprindere/Client: PETROTEL-LUKOIL
Instalatie/Plant: HPM
Scara/Scale: NTS

SIS 41–06–EF–2,5,6,006,007,010,020,21,N–06–EF–002,004,012,013,014,015,016,017,018

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea	Ninca N



PIESE DE CONDUCTE – LISTA DE PIESE

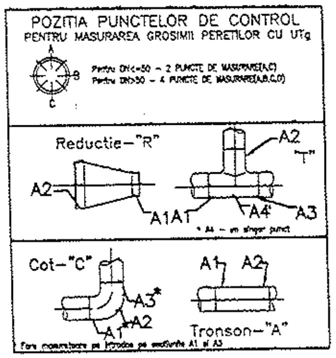
Poz	Descriere	DN	Cantitate
1	Teava	100	12.9 M
2	Teava	20	0.1 M
3	Sockolet	100X20	1
4	Cot 90	100	3
5	Flansa cu gat Dn100(ø114,3x–)/Pn25/B2	100	1
6	RSMS Dn20/Pn160	20	1
7	Garnitura Dn100/Pn25/B2	100	1
8	Prezoane cu 2 piulite	M20x110	8/16

Numele si prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: 06/2010
Data: 05.2016 Semnătura: [signature]

LEGENDA:

- limita sistem
- conducta existenta supusa examinarii
- conducta existenta in afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.



PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%-RT/Uis 25%-PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100
Clasa conducte/Pipe Class: –	de la /from: 06–K1; 06–K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 Judet Prahova

LUKOIL OIL COMPANY

Proiect-Nr/Project-No	Desen-Nr/Drawing-No	Rev/Rev
16-287/PEVIT	ANEXA 3	00

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 30 31

Cod Instalatie/Plant Code Orig.Plan

Intreprindere/Client: PETROTEL–LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

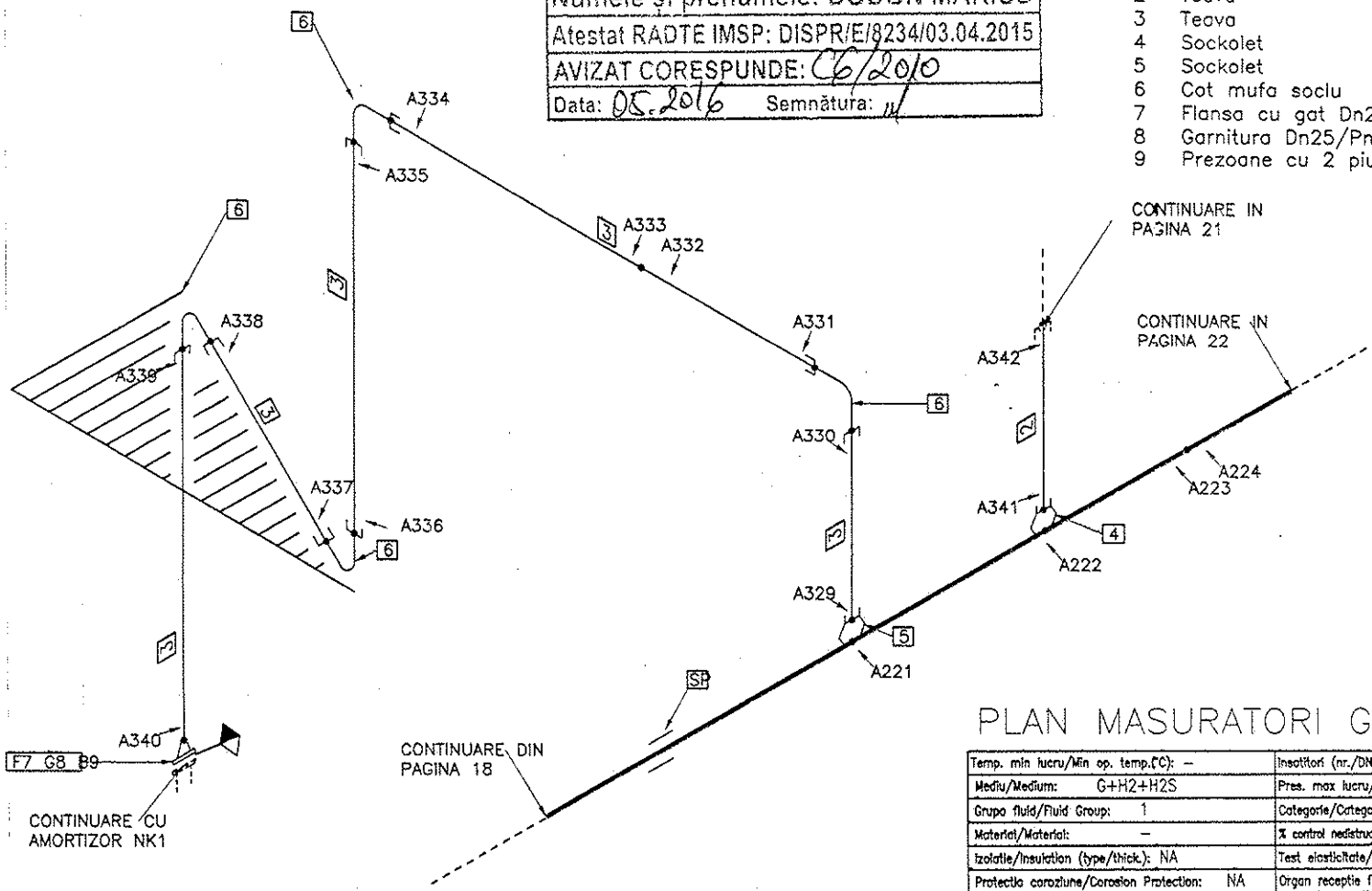
SIS 41–06–EF–2,5,6,006,007,010,020,21,N–06–EF–002,004,012,013,014,015,016,017,018 pag/pag 19 din/from 26

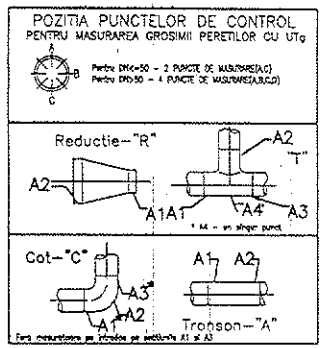
Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Ninca N.

Numele și prenumele: DODON MARIUS	
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015	
AVIZAT CORESPUNDE: C6/2010	
Data: 05.2016	Semnătura:

PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	4.4 M
2	Teava	40	0.3 M
3	Teava	25	6 M
4	Sockolet	150X40	1
5	Sockolet	150X25	1
6	Cot mufa soclu	25	4
7	Flansa cu gat Dn25(ø33,7x–)/Pn25/B2	25	1
8	Garnitura Dn25/Pn25/B2	25	1
9	Prezoane cu 2 piulite	M20x110	8/16





LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

PLAN MASURATORI GROSIMI

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%-RT/UTs 25%-PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100
Clasa conducte/Pipe Class: –	de la /from: 06–K1; 06–K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti
Str. Mihai Bravu, nr.235
judet Prahova

LUKOIL OILCOMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Proiect Nr./Project No.							Desen Nr./Drawing-No							Rev/Rev	
16-287/PSVII							ANEXA 3							00	

17	18	19	20	21	22	23	30	31
Cod Instalatie/Plant Code							Orig.Plan	

Intreprindere/Client: PETROTEL–LUKOIL

Instalatie/Plant: HPM

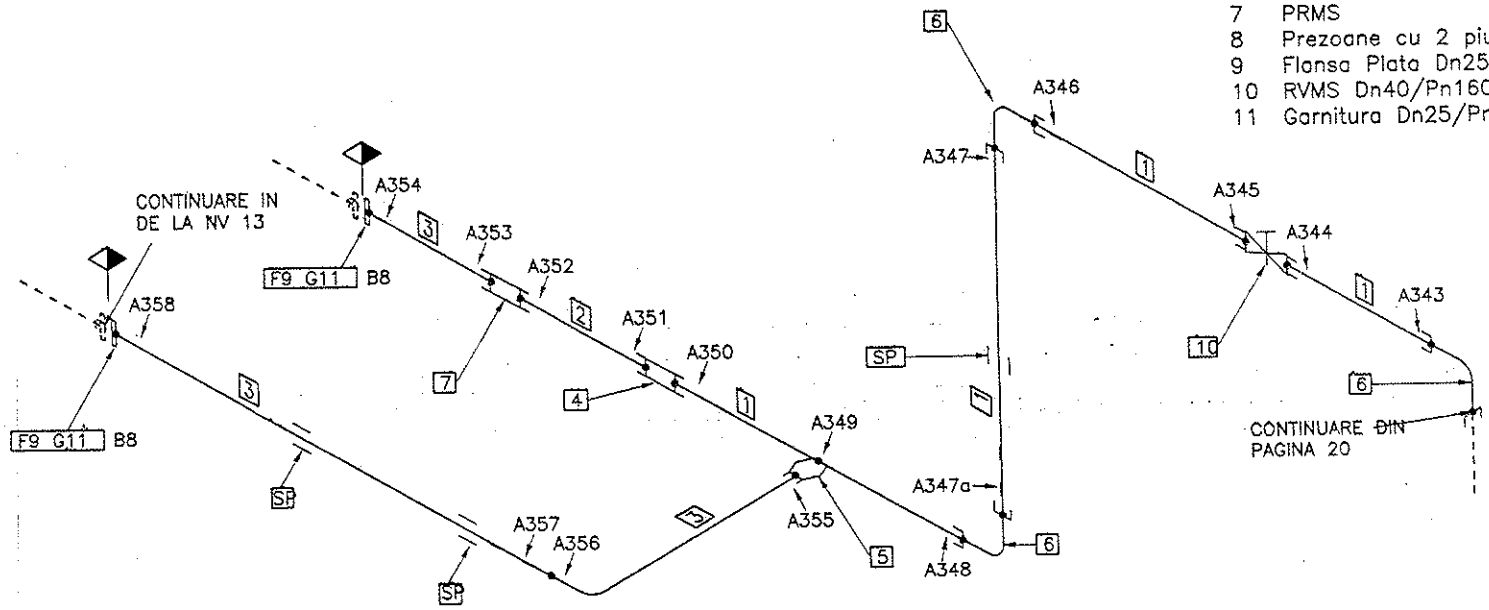
Scara/Scale: NTS

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Ninca N.

SIS 41–06–EF–2,5,6,006,007,010,020,21,N–06–EF–002,004,012,013,014,015,016,017,018

PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	40	3.85 M
2	Teava	32	0.1 M
3	Teava	25	4.8 M
4	PRMS	40X32	1
5	Sockolet	40X25	1
6	Cot mufa soclu	40	3
7	PRMS	32X25	1
8	Prezoane cu 2 piulite	M12x80	8/16
9	Flansa Plata Dn25(ø33,7x–)/Pn25/B2	25	2
10	RVMS Dn40/Pn160	40	1
11	Garnitura Dn25/Pn25/B2	25	2



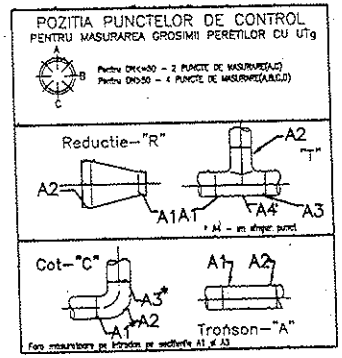
Numele și prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: C6/2010
Data: 05.2016 Semnătura:

LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului



PLAN MASURATORI GROSIMI

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA		Temp. max lucru/Max op. temp.(°C): 100
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15		Modul/Module: –
Grupa fluid/Fluid Group: 1	Categorie/Category: III		Mediu proba/Test medium: Apa
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%-RT/UTs 25%-PT/MT		Presiune proba/Test pressure(bar): –
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –		Diagrama P&I/P&ID No.: –
Protectia coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: –		Temp. de proiectare/Design temp.(°C):100
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15		la /to: Colector facla
Clasa conducte/Pipe Class: –	de la /from:06-K1; 06-K2; Supape siguranta.		

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 judet Prahova

LUKOIL OIL COMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Proiect-Nr/Project-No							Desen-Nr/Drawing-No							Rev/Rev	
16-287/PEVIT							ANEXA 3							00	

17	18	19	20	21	22	23	30	31
Cod Instalatie/Plant Code							Orig.Plan	

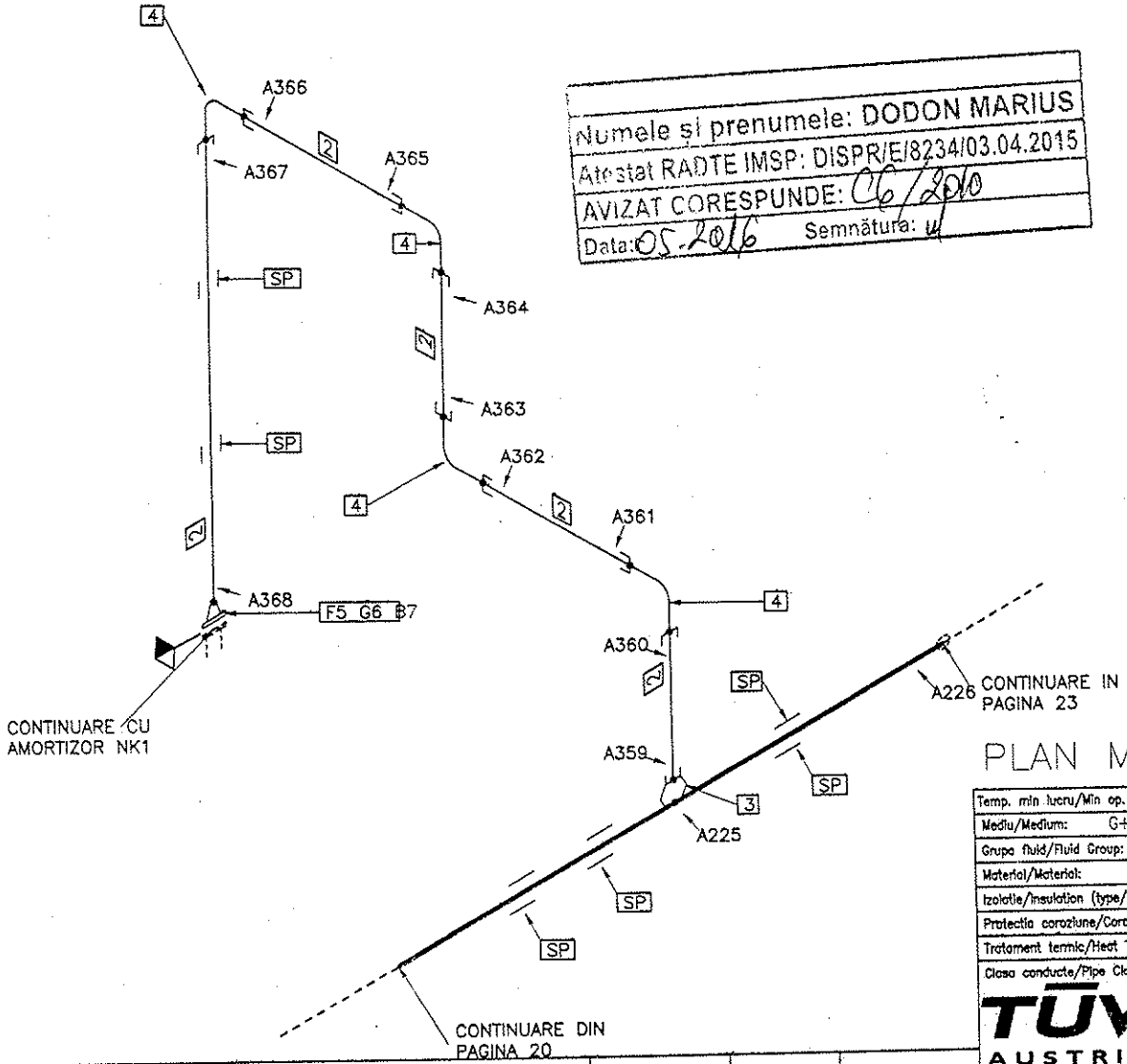
Intreprindere/Client: PETROTEL–LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

SIS 41–06–EF–2,5,6,006,007,010,020,21,N–06–EF–002,004,012,013,014,015,016,017,018 pag/pag 21 din/from 26

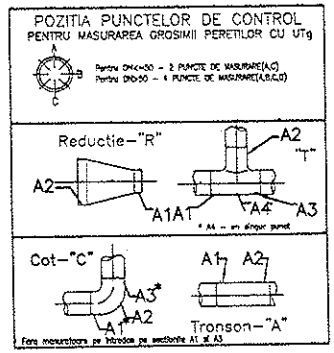
Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T	Ninca N



Numele si prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: 06/2016
Data: 05.2016 Semnătura:

PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	8.6 M
2	Teava	25	8.9 M
3	Sockolet	150X25	1
4	Cot mufa soclu	25	4
5	Flansa cu gat Dn25(ø33,7x–)/Pn25/B2	25	1
6	Garnitura Dn25/Pn25/B2	25	1
7	Prezoane cu 2 piulite	M12x80	4/8



LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existentă în afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%–RT/UT; 25%–PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia corozione/Corrosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama PăID/PăID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100
Clasa conducte/Pipe Class: –	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti
Str. Mihai Bravu, nr.235
Judet Prahova

LUKOIL OIL COMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Proiect-Nr/Project-No						Desen-Nr/Drawing-No								Rev/Rev	
16-287/PEVIT						ANEXA 3								00	
17	18	19	20	21	22	23	30	31							
Cod Instalatie/Plant Code							Orig.Plan								

Intreprindere/Client: PETROTEL-LUKOIL

Instalatie/Plant: HPM

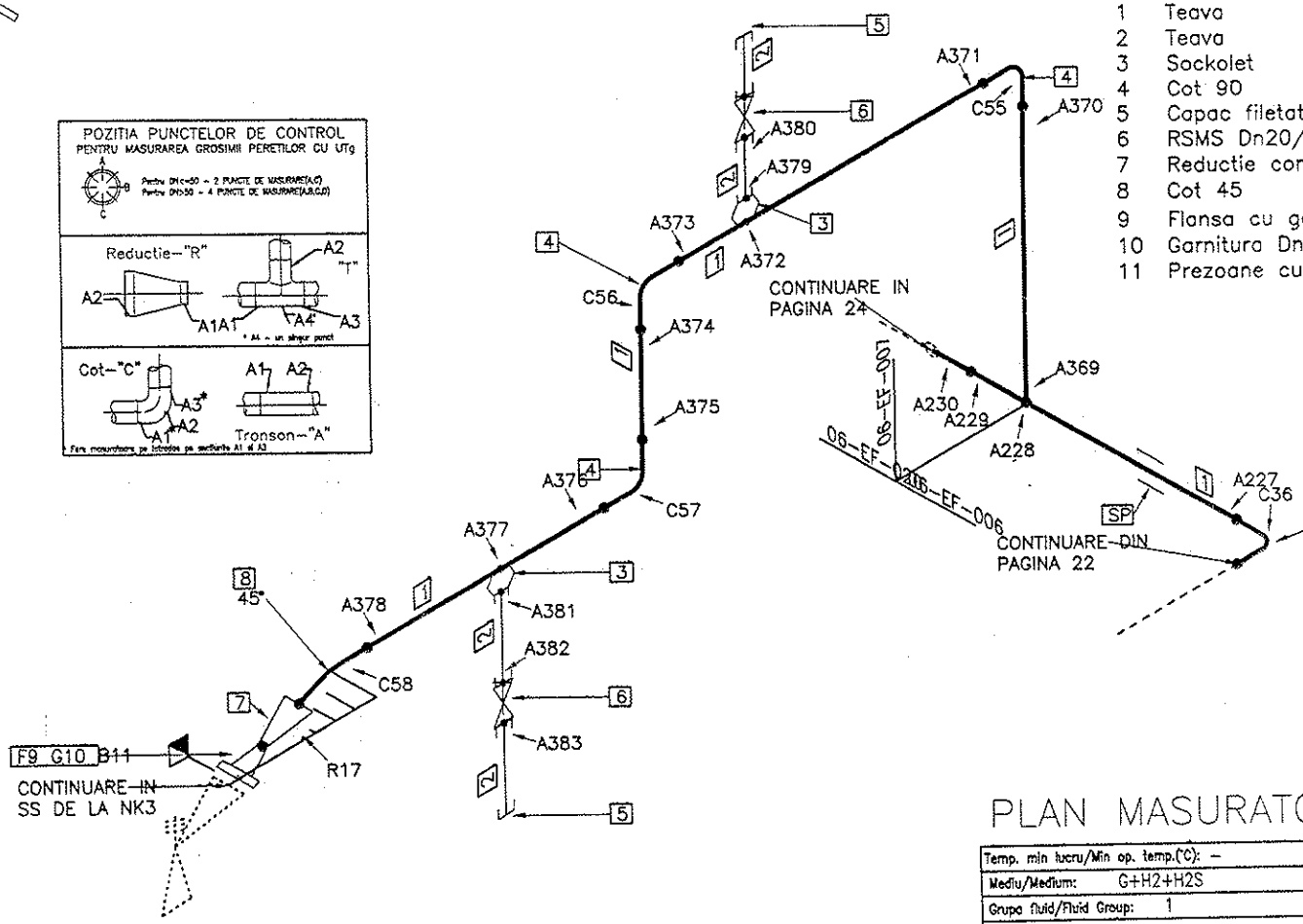
Scara/Scale: NTS

SIS 41-06-EF-2,5,6,006,007,010,020,21,N-06-EF-002,004,012,013,014,015,016,017,018 pag/pag 22 din/from 26

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Ninca N.

PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	8.6 M
2	Teava	20	0.5 M
3	Sockolet	150X20	2
4	Cot 90	150	4
5	Capac filetat	20	2
6	RSMS Dn20/Pn160	20	2
7	Reductie concentrica	150X100	1
8	Cot 45	150	1
9	Flansa cu gat Dn100(ø114,3x–)/Pn25/B2	100	1
10	Garnitura Dn100/Pn25/B2	100	1
11	Prezoane cu 2 piulite	M20x110	8/16



Numele și prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: C6/2010
Data: 05.2016 Semnătura:

LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

Configuratia, componente si dimensiunile vor fi verificate inainte de examinare.

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%–RT/UTs 25%–PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia corozione/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100
Clasa conducte/Pipe Class: –	de la /from: 06–K1; 06–K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL–LUKOIL S.A. Ploiesti
Str. Mihai Bravu, nr.235
Judet Prahova

LUKOIL OIL COMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Proiect-Nr/Project-No						Desen-Nr/Drawing-No								Rev/Rev	
16-287/PEVIT						ANEXA 3								00	

17	18	19	20	21	22	23	30	31
Cod Instalatie/Plant Code							Orig.Plan	

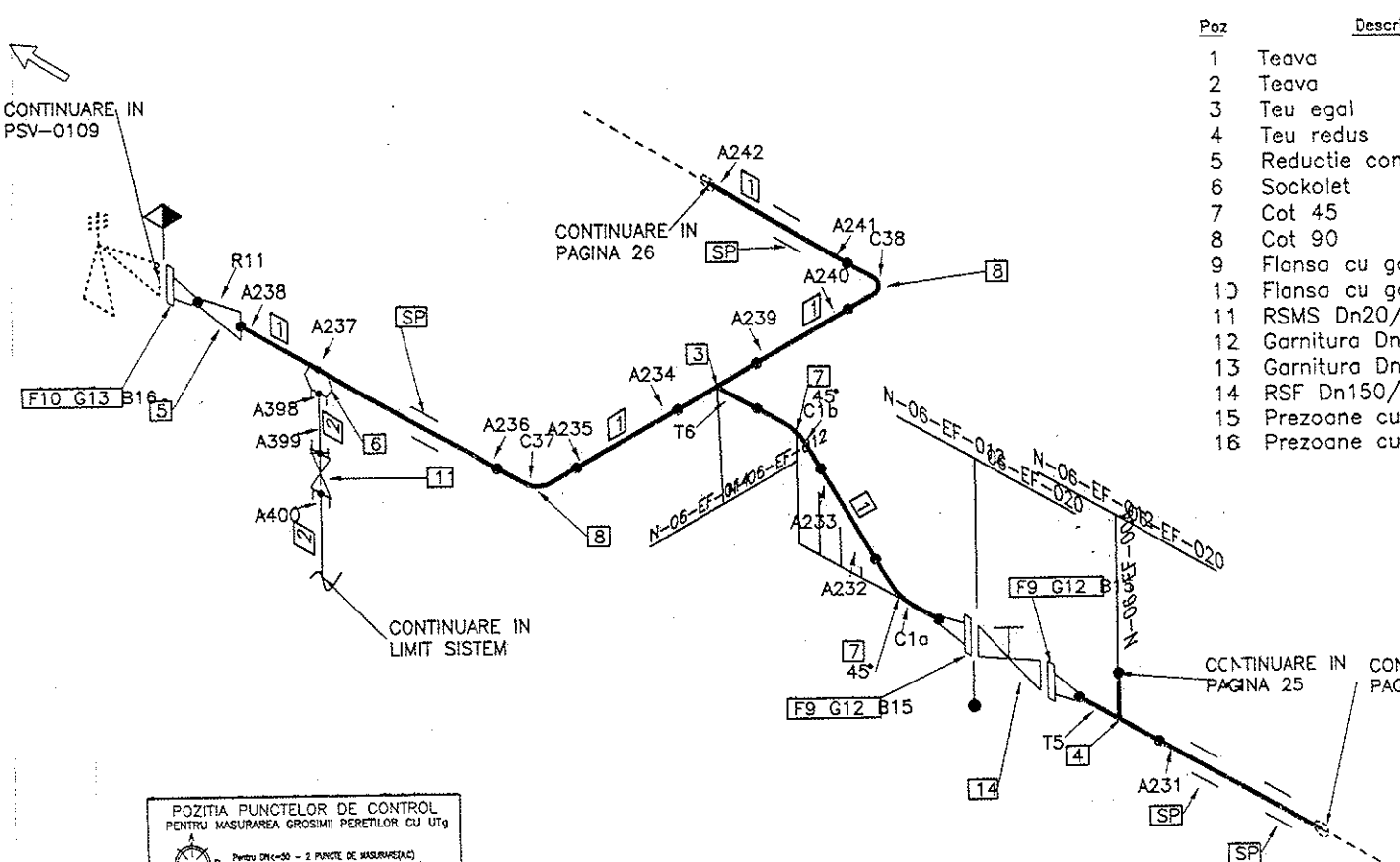
Intreprindere/Client: PETROTEL–LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

SIS 41–06–EF–2,5,6,006,007,010,020,21,N–06–EF–002,004,012,013,014,015,016,017,018 pag/pag 23 din/from 26

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Ninca N.



PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	14.4 M
2	Teava	20	0.25 M
3	Teu egal	150X150	1
4	Teu redus	150X100	1
5	Reductie concentrica	150X100	1
6	Sockolet	150X20	1
7	Cot 45	150	2
8	Cot 90	150	2
9	Flansa cu gat Dn150(ø168,3x–)/Pn25/B2	150	2
10	Flansa cu gat Dn100(ø114,3x–)/Pn25/B2	100	1
11	RSMS Dn20/Pn160	20	1
12	Garnitura Dn150/Pn25/B2	150	2
13	Garnitura Dn100/Pn25/B2	100	1
14	RSF Dn150/ PN25/B2	150	1
15	Prezoane cu 2 piulite	M24x130	16/32
16	Prezoane cu 2 piulite	M20x110	8/16

Numele și prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: C6/2010
DATA: 05.2016 Semnătura:

LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

POZITIA PUNCTELOR DE CONTROL PENTRU MASURAREA GROSIMII PERETILOR CU UTg

Pentru DN(<50 – 2 PUNCTE DE MASURARE(A,C)
Pentru DN>50 – 4 PUNCTE DE MASURARE(A,B,C,D)

Reductie–"R"

Cot–"C"

Tronson–"A"

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA		
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100	
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –	
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%-RT/UT 25%-PT/MT	Mediu proba/Test medium: Apa	
Izolatie/Insulation (type/thick.) NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –	
Protectia coroziune/Corosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –	
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100	
Clasa conducte/Pipe Class: –	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facla	

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 Judet Prahova

LUKOIL OILCOMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Proiect-Nr/Project-No						Desen-Nr/Drawing-No								Rev/Rev	
16-287/PEVIT						ANEXA 3								00	

17	18	19	20	21	22	23	30	31
Cod Instalatie/Plant Code							Orig.Plan	

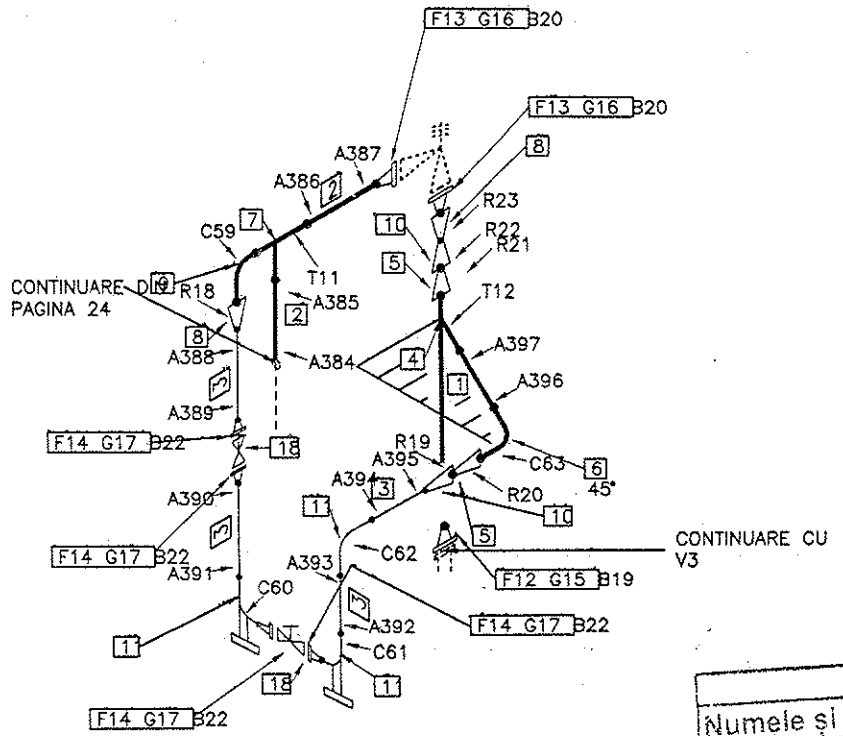
Intreprindere/Client: PETROTEL–LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

SIS 41–06–EF–2,5,6,006,007,010,020,21,N–06–EF–002,004,012,013,014,015,016,017,018 pag/pag 24 din/from 26

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Ninca N.

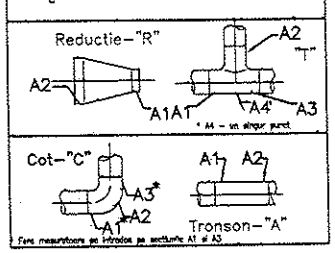


PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	0.7 M
2	Teava	100	5.2 M
3	Teava	50	4.2 M
4	Teu egal	150X150	1
5	Reductie concentrica	150X80	2
6	Cot 45	150	1
7	Teu egal	100X100	1
8	Reductie concentrica	100X50	2
9	Cot 90	100	1
10	Reductie concentrica	80X50	2
11	Cot 90	50	3
12	Flansa cu gat Dn150(ø168,3x–)/Pn25/B2	150	1
13	Flansa cu gat Dn100(ø114,3x–)/Pn25/B2	100	2
14	Flansa cu gat Dn50(ø60,3x–)/Pn25/B2	50	4
15	Garnitura Dn150/Pn25/B2	150	1
16	Garnitura Dn100/Pn25/B2	100	2
17	Garnitura Dn50/Pn25/B2	50	4
18	RSF Dn50/ PN25/B2	50	2
19	Prezoane cu 2 piulite	M24x130	8/16
20	Prezoane cu 2 piulite	M20x110	16/32
21	Prezoane cu 2 piulite	M16x90	16/32

Numele și prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: C6/2010
Data: 05.2016 Semnătura:

POZITIA PUNCTELOR DE CONTROL PENTRU MASURAREA GROSIMII PERETILOR CU UT



LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%-RT/UTs 25%-PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia coraziune/Corrosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama: P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C): 100
Clasa conducte/Pipe Class: –	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 Judet Prahova

LUKOIL OILCOMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Proiect-Nr/Project-No	Desen-Nr/Drawing-No	Rev/Rev
16-287/PEVIT	ANEXA 3	00

17	18	19	20	21	22	23	30	31

Cod Instalatie/Plant Code | Orig.Plan

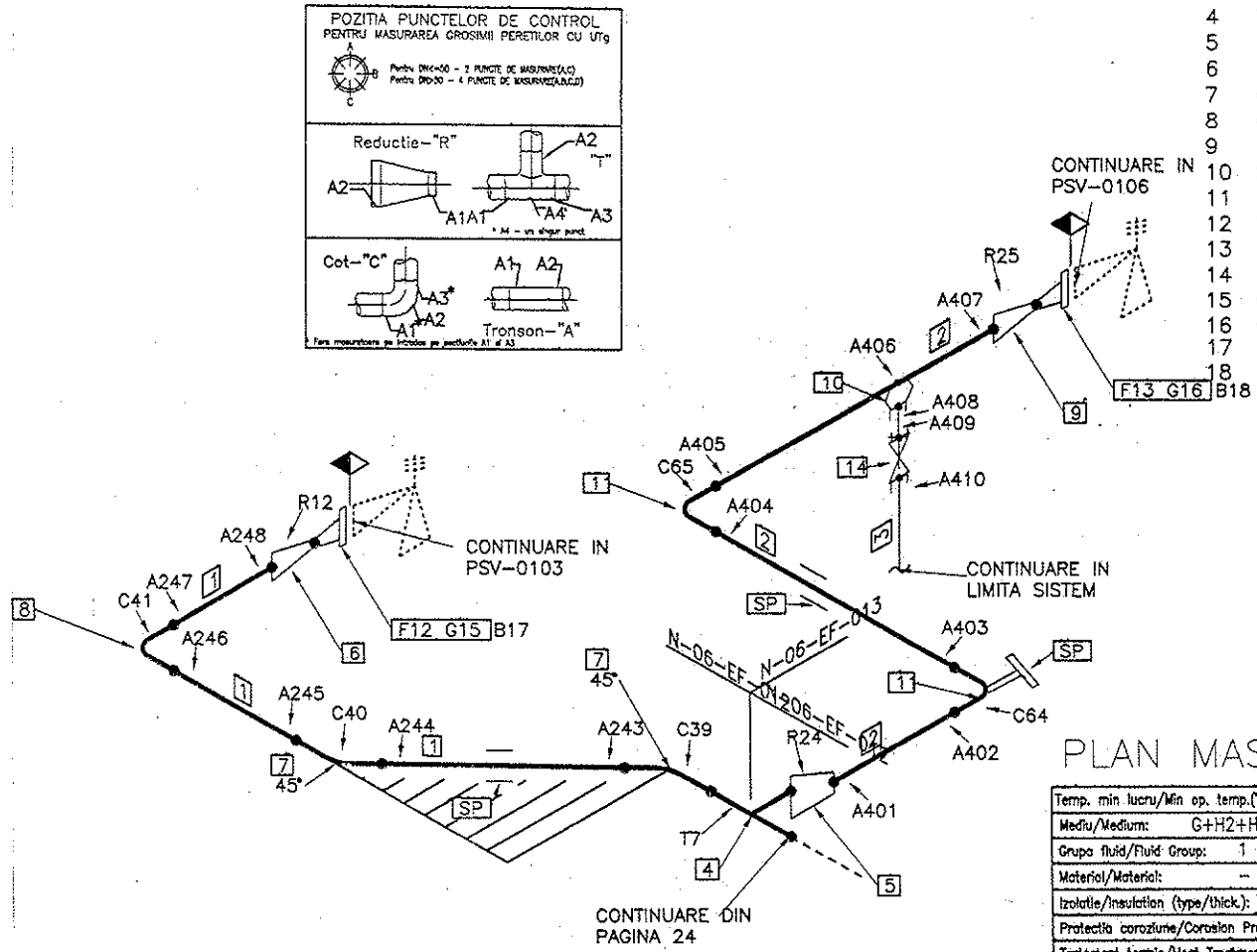
Intreprindere/Client: PETROTEL-LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

SIS 41-06-EF-2,5,6,006,007,010,020,21,N-06-EF-002,004,012,013,014,015,016,017,018

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea I.	Ninca N.



PIESE DE CONDUCTE – LISTA DE PIESE

Poz	Descriere	DN	Cantitate
1	Teava	150	3.2 M
2	Teava	100	4.3 M
3	Teava	20	0.2 M
4	Teu egal	150X150	1
5	Reductie excentrica	150X100	1
6	Reductie concentrica	150X100	1
7	Cot 45	150	2
8	Cot 90	150	1
9	Reductie concentrica	100X80	1
10	Sockolet	100X20	1
11	Cot 90	100	2
12	Flansa cu gat Dn100(ø114,3x–)/Pn25/B2	100	1
13	Flansa cu gat Dn80(ø88,9x–)/Pn25/B2	80	1
14	RSMS Dn20/Pn160	20	1
15	Garnitura Dn100/Pn25/B2	100	1
16	Garnitura Dn80/Pn25/B2	80	1
17	Prezoane cu 2 piulite	M24x130	8/16
18	Prezoane cu 2 piulite	M20x110	8/16

Numele si prenumele: DODON MARIUS
Atestat RADTE IMSP: DISPR/E/8234/03.04.2015
AVIZAT CORESPUNDE: CB/2010
Data: 05.2016 Semnătura:

LEGENDA:

–limita sistem

–conducta existenta supusa examinarii

–conducta existenta in afara sistemului

Configuratia, componenta si dimensiunile vor fi verificate inainte de examinare.

PLAN MASURATORI GROSIMI

Temp. min lucru/Min op. temp.(°C): –	Insotitori (nr./DN)/Tracing (nr./ND): NA	
Mediu/Medium: G+H2+H2S	Pres. max lucru/Max. op. pressure(bar): 15	Temp. max lucru/Max op. temp.(°C): 100
Grupa fluid/Fluid Group: 1	Categorie/Category: III	Modul/Module: –
Material/Material: –	% control nedistructiv/Nondistructiv test: 25%-RT/UT; 25%-PT/MT	Mediu proba/Test medium: Apa
Izolatie/Insulation (type/thick.): NA	Test elasticitate/Elasticity Test: –	Presiune proba/Test pressure(bar): –
Protectia coroziune/Corrosion Protection: NA	Organ receptie finala/Final reception: –	Diagrama P&I/P&ID No.: –
Tratament termic/Heat Treatment: NA	Presiune proiectare/Design pressure(bar): 15	Temp. de proiectare/Design temp.(°C):100
Clasa conducte/Pipe Class: –	de la /from: 06-K1; 06-K2; Supape siguranta.	la /to: Colector facla

TÜV AUSTRIA ROMANIA

S.C. PETROTEL-LUKOIL S.A. Ploiesti Str. Mihai Bravu, nr.235 Judet Prahova

LUKOIL OIL COMPANY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Proiect-Nr/Project-No						Desen-Nr/Drawing-No								Rev/Rev	
16-287/PEVIT						ANEXA 3								00	

17	18	19	20	21	22	23	30	31
Cod Instalatie/Plant Code							Drig.Plan	

Intreprindere/Client: PETROTEL-LUKOIL

Instalatie/Plant: HPM

Scara/Scale: NTS

SIS 41-06-EF-2,5,6,006,007,010,020,21,N-06-EF-002,004,012,013,014,015,016,017,018 pag/pag 26 din/from 26

Rev/Rev	Denumirea modificarii/Change description	Data/Date	Intocmit/Designer	Verificat/Checked
04				
03				
02				
01				
00	INTOCMIRE PROGRAM EXAMINARI	03.2016	Florea T.	Ninca N.

LUKOIL OIL COMPANY

TÜV AUSTRIA ROMANIA

BREVIAR DE CALCUL
SIS 41

COMANDA		Anul fabricatiei	1975
BENEFICIAR	S.C. PETROTEL-LUKOIL S.A.		
INSTALATIA	HPM		

NR.	ANEXA III			
PAG				
REV	DATA	INTOCMIT	VERIFICAT	APROBAT
0	09.2016	Cretu G.	Balind I.	Ninca N.
1				
2				

CARACTERISTICI TEHNICE CONDUCTE / CALCULUL DE DIMENSIONARE LA PRESIUNEA INTERIOARA

Nr. crt	SIMBOL	MATERIAL	p_c [bar]	p_c [N/mm²]	DN	D_e [mm]	t [°C]	t_1 [°C]	$R_{p0,2}^{t}$ [N/mm²]	σ [°C]	$R_{p0,2}^{t}$ [N/mm²]	$R_{p0,2}'$ [N/mm²]	R_m [N/mm²]	f [N/mm²]	z	e [mm]	c_0 [mm]	c_1 [mm]	c_2 [mm]	e_r [mm]	e_{ad} [mm]	e_2 [mm]	e' [mm]	gros. min. de inloc. e_{min} [mm]
42	A53-A54	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
43	C12	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
44	A55-A56	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
45	C13	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
46	A57-A58	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
47	A69-A70	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
48	C14	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,37	0	5,4	11,0	6,6	1,49	3,30
49	A71-A72	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
50	C15	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
51	A73-A74	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
52	C16	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,37	0	5,4	10,97	6,6	1,49	3,30
53	A75-A76	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,37	0	5,4	10,97	6,6	1,49	3,30
54	C17	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,37	0	5,4	10,97	6,6	1,49	3,30
55	A77-A78	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
56	A79-A80	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
57	C18	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,7	8,11	1,49	3,30
58	A81-A82	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,37	0	5,4	10,97	6,6	1,49	3,30
59	A83-A84	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,37	0	5,4	10,97	6,8	1,49	3,30
60	C19	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
61	A85-A86	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
62	C20	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
63	A87-A88	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	188	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
64	A89-A90	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
65	C21	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
65	A91-A92	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
67	C22	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,37	0	5,4	11,0	6,6	1,49	3,30
68	A93-A94-A95	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
69	T1	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,09	0	5,1	8,74	4,65	1,49	3,30
70	A96-A97	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	0,89	0	4,6	7,14	3,25	1,17	3,30
71	C23	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	0,7	0	4,4	5,56	1,87	1,17	3,30
72	A98-A99	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	0,79	0	4,5	6,35	2,56	1,17	3,30
73	C24	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,87	3	0,89	0	4,6	7,14	3,25	1,17	3,30
74	A100-A101	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	0,79	0	4,5	6,35	2,56	1,17	3,30
75	C25	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	0,7	0	4,4	5,56	1,87	1,17	3,30
76	R1	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30
77	R2	SA234WPB	15,0	1,5	200	219,1	100	65	195	125	186	189,75	330	126,50	1	1,29	3	1,39	0	5,7	11,13	6,74	1,79	3,60
78	R3	SA106-GrA	15,0	1,5	300	323,9	100	65	195	125	186	189,75	330	126,50	1	1,91	3	1,39	0	6,3	11,13	6,74	2,41	4,00
79	A102-A103-A104	SA106Gr.A	15,0	1,5	300	323,9	100	65	195	125	186	189,75	330	126,50	1	1,91	3	1,59	0	6,5	12,7	8,11	2,41	4,00
80	T2	SA234WPB	15,0	1,5	300	323,9	100	65	195	125	186	189,75	330	126,50	1	1,91	3	1,39	0	6,3	11,13	6,74	2,41	4,00
81	A105-A106-A107	SA106-GrA	15,0	1,5	300	323,9	100	65	195	125	186	189,75	330	126,50	1	1,91	3	1,78	0	6,7	14,27	9,49	2,41	4,00
82	R4	SA234WPB	15,0	1,5	300	323,9	100	65	195	125	186	189,75	330	126,50	1	1,91	3	1,19	0	6,1	9,53	5,34	2,41	4,00

CALCULUL PRESIUNII DE INCERCARE

Nr. crt	PSXON	FLUID PROBA	f_{test} [N/mm²]	R_{p} [N/mm²]	$0,95R_p$ [N/mm²]	$P_{test λ}$ [bar]	$P_{test min}$ [bar]	$P_{test max}$ [bar]	P_{ph} [bar]
42	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
43	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
44	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
45	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
46	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
47	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
48	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
49	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
50	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
51	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
52	2260	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
53	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
54	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
55	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
56	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
57	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
58	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
59	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
60	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
61	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
62	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
63	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
64	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
65	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
65	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
67	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
68	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
69	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
70	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
71	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
72	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
73	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
74	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
75	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
76	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
77	3000	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
78	4500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
79	4500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
80	4500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
81	4500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5
82	4500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5

CALCULUL DE VERIFICARE A TENSIUNII EFECTIVE IN PROBA / CALCULUL DURATEI REMANENTE DE VIATA

Nr. crt	P_{test} ADOPTAT [N/mm²]	p_{test} ADOPTAT [N/mm²]	e_p [mm]	f'_{test} [N/mm²]	$f'_{test} \leq 0.95R_{eH}$	Gros. min. masurata, S0 [mm]	Durata de functionare, t [ani]	Vit. de coroz. calc. Vm [mm/an]		Durata reman. de viata [ani]	P_m
42	21,5	2,15	3,30	53,75	cond. verific.	8,1	41	0,03	0,15	21,3	5,0
43	21,5	2,15	3,30	53,75	cond. verific.	8,0	41	0,04	0,15	20,9	5,0
44	21,5	2,15	3,30	53,75	cond. verific.	8,0	41	0,04	0,15	20,9	5,0
45	21,5	2,15	3,30	53,75	cond. verific.	8,0	41	0,04	0,15	20,9	5,0
46	21,5	2,15	3,30	53,75	cond. verific.	8,0	41	0,04	0,15	20,9	5,0
47	21,5	2,15	3,30	53,75	cond. verific.	8,1	41	0,03	0,15	21,3	5,0
48	21,5	2,15	3,30	53,75	cond. verific.	9,0	41	0,05	0,15	25,3	5,0
49	21,5	2,15	3,30	53,75	cond. verific.	8,7	41	0,02	0,15	24,0	5,0
50	21,5	2,15	3,30	53,75	cond. verific.	8,7	41	0,02	0,15	24,0	5,0
51	21,5	2,15	3,30	53,75	cond. verific.	8,3	41	0,03	0,15	22,2	5,0
52	21,5	2,15	3,30	53,75	cond. verific.	9,1	41	0,05	0,15	25,8	5,0
53	21,5	2,15	3,30	53,75	cond. verific.	9,0	41	0,05	0,15	25,3	5,0
54	21,5	2,15	3,30	53,75	cond. verific.	9,2	41	0,04	0,15	26,2	5,0
55	21,5	2,15	3,30	53,75	cond. verific.	8,4	41	0,03	0,15	22,7	5,0
56	21,5	2,15	3,30	53,75	cond. verific.	8,5	41	0,02	0,15	23,6	5,0
57	21,5	2,15	3,30	53,75	cond. verific.	10,0	41	0,07	0,15	29,8	5,0
58	21,5	2,15	3,30	53,75	cond. verific.	9,1	41	0,05	0,15	25,8	5,0
59	21,5	2,15	3,30	53,75	cond. verific.	9,0	41	0,05	0,15	25,3	5,0
60	21,5	2,15	3,30	53,75	cond. verific.	8,4	41	0,03	0,15	22,7	5,0
61	21,5	2,15	3,30	53,75	cond. verific.	8,0	41	0,04	0,15	20,9	5,0
62	21,5	2,15	3,30	53,75	cond. verific.	8,3	41	0,03	0,15	22,2	5,0
63	21,5	2,15	3,30	53,75	cond. verific.	8,2	41	0,03	0,15	21,8	5,0
64	21,5	2,15	3,30	53,75	cond. verific.	8,3	41	0,03	0,15	22,2	5,0
65	21,5	2,15	3,30	53,75	cond. verific.	8,5	41	0,03	0,15	23,1	5,0
65	21,5	2,15	3,30	53,75	cond. verific.	8,3	41	0,03	0,15	22,2	5,0
67	21,5	2,15	3,30	53,75	cond. verific.	9,0	41	0,05	0,15	25,3	5,0
68	21,5	2,15	3,30	53,75	cond. verific.	8,1	41	0,03	0,15	21,3	5,0
69	21,5	2,15	3,30	53,75	cond. verific.	7,5	41	0,03	0,15	18,7	5,0
70	21,5	2,15	3,25	36,76	cond. verific.	6,0	41	0,03	0,15	12,0	7,52
71	21,5	2,15	1,87	64,81	cond. verific.	5,0	41	0,01	0,15	[redacted]	7,52
72	21,5	2,15	2,56	46,99	cond. verific.	6,1	41	0,01	0,15	12,4	7,52
73	21,5	2,15	3,25	36,76	cond. verific.	6,0	41	0,03	0,15	12,0	7,52
74	21,5	2,15	2,56	46,99	cond. verific.	5,7	41	0,02	0,15	10,7	7,52
75	21,5	2,15	1,87	64,81	cond. verific.	5,1	41	0,01	0,15	[redacted]	7,52
76	21,5	2,15	3,30	53,75	cond. verific.	8,0	41	0,04	0,15	20,9	5,0
77	21,5	2,15	3,60	64,35	cond. verific.	10,0	41	0,03	0,15	28,4	4,22
78	21,5	2,15	4,00	85,97	cond. verific.	10,3	41	0,02	0,15	28,0	3,16
79	21,5	2,15	4,00	85,97	cond. verific.	10,6	41	0,05	0,15	29,3	3,16
80	21,5	2,15	4,00	85,97	cond. verific.	10,2	41	0,02	0,15	27,6	3,16
81	21,5	2,15	4,00	85,97	cond. verific.	11,7	41	0,06	0,15	34,2	3,16
82	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

LUKOIL OIL COMPANY

TÜV AUSTRIA ROMANIA

BREVIAR DE CALCUL
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CARACTERISTICI TEHNICE CONDUCTE — CALCULUL DE DIMENSIONARE LA PRESIUNEA INTERIOARA — CALCULUL PRESIUNII DE INCERCARE — CALCULUL DE VERIFICARE A TENSIUNII EFECTIVE IN PROBA — CALCULUL DURATEI REMANENTE DE VIATA

	SIMBOL	MATE- RIAL	p_c [bar]	p_c [N/mm²]	DN	D_e [mm]	L [°C]	t [°C]	$R_{p0,2}^{t}$ [N/mm²]	t [°C]	$R_{p0,2}^{t}$ [N/mm²]	$R_{p0,2}^{t}$' [N/mm²]	R_m [N/mm²]	f [N/mm²]	z	e [mm]	c_4 [mm]	c_1 [mm]	c_2 [mm]	e_c [mm]	e_{ord} [mm]	e_r [mm]	e' [mm]	gros. min. de inloc. e_{min} [mm]	PSXON	FLUID PROBA	τ_{test} [N/mm²]	R_{eH}' [N/mm²]	0,95·R_{eH}' [N/mm²]	P_{calc} [bar]	P_{test} [bar]	$P_{test\,MAX}$ [bar]	P_{ph} [bar]		p_{test} ADOPTAT [N/mm²]	p_{test} ADOPTAT [N/mm²]	e_p [mm]	τ^{l}_{test} [N/mm²]	τ^{l}_{test}≤0,95R_{eH}'	Gros. min. masurata, S0 [mm]	Durata de functionare, t [ani]	Vit. de coroz. calc. Vm [mm/an]		Durata reman. de viata. [ani]	P_{max}
	R5	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,09	0	5,1	8,74	4,65	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,460	21,5		21,5	2,15	3,30	53,75	cond. verific.	7,2	41	0,04	0,15	17,3	5,06
	R6	SA234WPB	15,0	1,5	80	88,9	100	65	195	125	186	189,75	330	126,50	1	0,52	3	0,89	0	4,4	7,14	3,25	1,02	2,50	1200	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	37,15	cond. verific.	5,5	41	0,04	0,15	13,3	7,3206
5	T3	SA234WPB	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	1,38	0	4,7	11,07	6,69	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	24,85	cond. verific.	8,6	41	0,06	0,15	27,1	10,943
6	A108-A109-A110	SA106-GrA	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	0,79	0	4,1	6,35	2,56	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	24,85	cond. verific.	5,0	41	0,03	0,15	11,1	10,943
87	C26	SA234WPB	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	0,79	0	4,1	6,35	2,56	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	24,85	cond. verific.	5,3	41	0,03	0,15	12,4	10,943
88	A111-A112-113	SA106-GrA	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	0,79	0	4,1	6,35	2,56	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	24,85	cond. verific.	5,1	41	0,03	0,15	11,8	10,943
89	A114-A115	SA106-GrA	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	0,89	0	4,2	7,14	3,25	0,86	2,00	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	31,34	cond. verific.	5,9	41	0,03	0,15	17,3	8,6792
90	A116-A117-A118	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,7	0	3,9	5,56	1,87	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	1,87	14,43	cond. verific.	3,7	41	0,05	0,15	[redacted]	20,321
91	A119-A120	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,7	0	3,9	5,56	1,87	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	1,87	14,43	cond. verific.	3,7	41	0,05	0,15	[redacted]	20,321
	C27	SA234WPB	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,7	0	3,9	5,56	1,87	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	1,87	14,43	cond. verific.	3,2	41	0,06	0,15	[redacted]	20,321
	A121-A122	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,7	0	3,9	5,56	1,87	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	1,87	14,43	cond. verific.	3,5	41	0,05	0,15	[redacted]	20,321
94	A123-A124	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	1,14	0	4,3	9,09	4,95	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	4,5	41	0,11	0,15	9,3	20,272
95	A125-A126	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	1,14	C	4,3	9,09	4,95	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	5,0	41	0,10	0,15	11,1	20,272
96	A127-A128	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	1,14	C	4,3	9,09	4,95	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	5,0	41	0,10	0,15	11,1	20,272
97	A129-A130	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	1,14	C	4,3	9,09	4,95	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	4,8	41	0,10	0,15	10,2	20,272
98	A131-A132	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	1,14	C	4,3	9,09	4,95	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	4,9	41	0,10	0,15	10,7	20,272
99	A133	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	1,14	C	4,3	9,09	4,95	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	5,0	41	0,10	0,15	11,1	20,272
100	A134	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,89	0	4,1	7,82	3,84	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	13,38	cond. verific.	4,8	41	0,07	0,15	12,4	20,321
101	A135-A136	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,98	0	4,1	7,82	3,84	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	13,38	cond. verific.	4,9	41	0,07	0,15	12,9	20,321
102	A137-A138	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	1,14	0	4,3	9,09	4,95	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	4,8	41	0,10	0,15	10,2	20,272
103	A139-A140	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	1,14	0	4,3	9,09	4,95	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	4,8	41	0,10	0,15	10,2	20,272
104	A141-A142	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,39	0	5,1	11,13	6,74	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	8,1	41	0,07	0,15	21,3	7,5216
105	A143-A144	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	4,8	41	0,04	0,15	10,2	20,272
	A145-A146	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	4,7	41	0,04	0,15	9,8	20,272
107	A147-A148	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	4,7	41	0,04	0,15	9,8	20,272
108	A149-A150	SA106-GrA	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	0,89	0	4,2	7,14	3,25	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	24,85	cond. verific.	6,0	41	0,03	0,15	15,6	10,943
109	A151-A152	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	8,3	41	0,03	0,15	22,2	5,06
110	R7	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	8,5	41	0,03	0,15	23,1	5,06
111	T1A	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	7,7	41	0,04	0,15	19,6	5,06
112	C1A	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	7,3	41	0,05	0,15	17,8	5,06
113	R1A	SA234WPB	15,0	1,5	300	323,9	100	65	195	125	186	189,75	330	126,50	1	1,91	3	1,39	0	6,3	11,13	6,74	2,41	4,00	4500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	4,00	85,97	cond. verific.	9,8	41	0,04	0,15	24,9	3,1635
14	C1B	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,29	0	5,3	10,31	6,02	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	8,8	41	0,04	0,15	24,4	5,06
5	A153-A154	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,29	0	5,3	10,31	6,02	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	8,5	41	0,04	0,15	23,1	5,06
	C1C	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,29	0	5,3	10,31	6,02	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	6,3	41	0,10	0,15	13,3	5,06
	A155-A156	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,29	0	5,3	10,31	6,02	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	6,0	41	0,11	0,15	12,0	5,06
	R8	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,29	0	5,3	10,31	6,02	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	7,3	41	0,07	0,15	17,8	5,06
	A157-A158	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,98	0	4,1	7,82	3,84	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	13,38	cond. verific.	4,9	41	0,07	0,15	12,9	20,321
	A159-A160	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,98	0	4,1	7,82	3,84	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	13,38	cond. verific.	4,8	41	0,07	0,15	12,4	20,321
	A161-A162	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,98	0	4,1	7,82	3,84	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	13,38	cond. verific.	4,7	41	0,08	0,15	12,0	20,321
	A163-A164	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,98	0	4,1	7,82	3,84	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	13,38	cond. verific.	4,8	41	0,07	0,15	12,4	20,321
	A165-A166	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,98	0	4,1	7,82	3,84	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	13,38	cond. verific.	4,9	41	0,07	0,15	12,9	20,321

LUKOIL OIL COMPANY

TÜV AUSTRIA ROMANIA

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CARACTERISTICI TEHNICE CONDUCTE — CALCULUL DE DIMENSIONARE LA PRESIUNEA INTERIOARA — CALCULUL PRESIUNII DE INCERCARE — CALCULUL DE VERIFICARE A TENSIUNII EFECTIVE IN PROBA — CALCULUL DURATEI REMANENTE DE VIATA

Nr. crt.	SIMBOL	MATERIAL	P_c [bar]	P_c [N/mm²]	DN	D_e [mm]	t [°C]	t_1 [°C]	$R_{p0,2}^{t}$ [N/mm²]	t [°C]	$R_{p0,2}^{t}$ [N/mm²]	$R_{p0,2}'$ [N/mm²]	R_m [N/mm²]	f [N/mm²]	z	e [mm]	c_4 [mm]	c_1 [mm]	c_2 [mm]	e_1 [mm]	e_{ord} [mm]	e_c [mm]	e' [mm]	gros. min. de inloc. e_{min} [mm]	PSXON	FLUID PROBA	f_{test} [N/mm²]	R_{eh}' [N/mm²]	$0.95 \cdot R_{eh}'$ [N/mm²]	P_{test} [bar]	P_{with} [bar]	$P_{test\,MAX}$ [bar]	P_{ph} [bar]		P_{test} ADOPTAT [N/mm²]	P_{test} ADOPTAT [N/mm²]	e_R [mm]	f_{test}^{t} [N/mm²]	$f_{test} \le 0.95 Re_H^t$	Gros. min. masurata S0 [mm]	Durata de functionare a, t [ani]	Vit. de coroz. calc. Vm [mm/an]		Durata reman. de viata [ani]	P_{max}
124	A167	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,98	0	4,1	7,82	3,84	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	13,38	cond. verific.	5,1	41	0,07	0,15	13,8	20,321
125	A168-A169	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,98	0	4,1	7,82	3,84	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	13,38	cond. verific.	5,0	41	0,07	0,15	13,3	20,321
126	A170-A171	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,98	0	4,1	7,82	3,84	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	13,38	cond. verific.	5,0	41	0,07	0,15	13,3	20,321
127	A172-A173	SA106-GrA	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	0,79	0	4,1	6,35	2,56	0,86	2,00	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	31,34	cond. verific.	4,1	41	0,05	0,15	9,3	8,6792
128	A174-A175	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,98	0	4,1	7,82	3,84	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	13,38	cond. verific.	4,1	41	0,02	0,15	9,3	20,321
129	A176-A177	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,99	0	4,1	7,82	3,84	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	13,38	cond. verific.	4,3	41	0,09	0,15	10,2	20,321
130	A178-A179	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	4,1	41	0,05	0,15	[redacted]	20,272
131	A180-A181	SA106-GrA	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	0,79	0	4,1	6,35	2,56	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	24,85	cond. verific.	0,0	41	neex	neex	neex	10,943
132	A182-A183	SA106-GrA	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	0,79	0	4,1	6,35	2,56	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	24,85	cond. verific.	4,3	41	0,05	0,15	8,0	10,843
[illegible]3	A184-A185	SA106-GrA	15,0	1,5	40	48,3	100	65	195	125	186	189,75	330	126,50	1	0,28	3	0,64	0	3,9	5,08	1,45	0,78	2,50	600	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	1,45	34,86	cond. verific.	4,2	41	0,02	0,15	[redacted]	13,81
134	A186-A187	SA106-GrA	15,0	1,5	40	48,3	100	65	195	125	186	189,75	330	126,50	1	0,28	3	0,64	0	3,9	5,08	1,45	0,78	2,50	600	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	1,45	34,86	cond. verific.	4,3	41	0,02	0,15	8,0	13,81
135	A188	SA106-GrA	15,0	1,5	40	48,3	100	65	195	125	186	189,75	330	126,50	1	0,28	3	0,64	0	3,9	5,08	1,45	0,78	2,50	600	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	1,45	34,86	cond. verific.	4,5	41	0,01	0,15	8,9	13,81
136	A189-A190	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,79	0	4,8	6,35	2,56	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,56	69,70	cond. verific.	5,0	41	0,03	0,15	[redacted]	5,06
137	C28	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,79	0	4,8	6,35	2,56	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,56	69,70	cond. verific.	5,8	41	0,01	0,15	11,1	5,06
138	A191-A192	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,7	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	9,3	41	0,08	0,15	26,7	5,06
139	C29	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,7	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	9,6	41	0,08	0,15	28,0	5,06
140	A193-A194	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,8	41	0,03	0,15	11,1	5,06
141	C30	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,5	41	0,04	0,15	9,8	5,06
142	A195-A196	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	6,1	41	0,02	0,15	12,4	5,06
143	A197-A198	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	6,0	41	0,03	0,15	12,0	5,06
144	A199-A200	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,8	41	0,03	0,15	11,1	5,06
145	A201-A202	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,2	41	0,05	0,15	8,4	5,06
146	C31	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,3	41	0,04	0,15	8,9	5,06
[illegible]7	A203-A204	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,6	41	0,04	0,15	10,2	5,06
148	C32	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,3	41	0,04	0,15	8,9	5,06
149	A205-A206	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,6	41	0,04	0,15	10,2	5,06
150	C33	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,2	41	0,05	0,15	8,4	5,06
151	A207-A208	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,6	41	0,04	0,15	10,2	5,06
152	C34	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,2	41	0,05	0,15	8,4	5,06
153	A209-A210-A211	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,5	41	0,04	0,15	9,8	5,06
154	C35	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,1	41	0,05	0,15	8,0	5,06
155	A212-A213	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,5	41	0,04	0,15	9,8	5,06
156	T4	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,78	0	5,8	14,27	9,49	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	11,4	41	0,07	0,15	36,0	5,06
157	A214-A215-A216	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	6,0	41	0,03	0,15	12,0	5,06
158	A217-A218-A219-A220	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	6,0	41	0,03	0,15	12,0	5,06
159	A221-A222-A223	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	6,0	41	0,03	0,15	12,0	5,06
160	A224-A225-A226	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,8	41	0,03	0,15	11,1	5,06
161	C36	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	123,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,8	41	0,03	0,15	11,1	5,06
162	A227-A228-A229	SA106-GrA	15,0	1,6	160	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,7	41	0,03	0,15	10,7	5,06
163	A230-A231	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,89	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	6,0	41	0,03	0,15	12,0	5,06

LUKOIL OIL COMPANY

TÜV AUSTRIA ROMANIA

BREVIAR DE CALCUL
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COMANDA		iul fabricatiei	1975	NR.		ANEXA III		
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BENEFICIAR	S.C. PETROTEL-LUKOIL S.A.			REV	DATA	SIN	VERIFICAT	APROBAT
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CARACTERISTICI TEHNICE CONDUCTE; CALCULUL DE DIMENSIONARE LA PRESIUNEA INTERIOARA; CALCULUL PRESIUNII DE INCERCARE; CALCULUL DE VERIFICARE A TENSIUNII EFECTIVE IN PROBA; CALCULUL DURATEI REMANENTE DE VIATA

Nr. crt	SIMBOL	MATERIAL	P_c [bar]	P_c [N/mm²]	DN	D_e [mm]	t [°C]	t_1 [°C]	$R_{p0,2}''$ [N/mm²]	t [°C]	$R_{p0,2}'$ [N/mm²]	$R_{p0,2}$ [N/mm²]	R_m [N/mm²]	f [N/mm²]	z	a [mm]	c_0 [mm]	c_1 [mm]	c_2 [mm]	e_r [mm]	e_{nom} [mm]	e_a [mm]	e' [mm]	gros. min. de inloc. e_{min} [mm]	PSXDN	FLUID PROBA	f_{test} [N/mm²]	R_{et}' [N/mm²]	$0,95 R_{et}'$ [N/mm²]	P_{test} [bar]	P_{test} [bar]	$P_{test\,MAX}$ [bar]	P_{ph} [bar]		P_{test} ADOPTAT [N/mm²]	P_{test} ADOPTAT [N/mm²]	e_p [mm]	f_{test} [N/mm²]	$f_{test} \le 0,95 Re_t'$	Gros. min. masurata, S0 [mm]	Durata de functionare, t [ani]	V_r de coroz. calc. Vm [mm/an]		Durata remanenta de viata [ani]	P_{max}
206	C45	SA234WPB	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	0,79	0	4,1	6,35	2,56	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	24,85	cond. verific.	5,0	41	0,03	0,15	11,1	10,943
207	A274-A275-A276	SA106-GrA	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	0,79	0	4,1	6,35	2,56	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	—	21,5	2,15	2,50	24,85	cond. verific.	4,3	41	0,05	0,15	8,0	10,943
208	A277-A278	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,7	0	3,9	5,56	1,87	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,6	2,15	1,87	14,43	cond. verific.	3,5	41	0,05	0,15	[redacted]	20,321
209	A279-A280	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,7	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	10	41	0,07	0,15	29,8	5,06
210	R16	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,98	3	1,19	0	5,2	9,53	5,34	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	7,3	41	0,05	0,15	17,8	5,05
211	A281-A282	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	1,14	0	4,3	9,09	4,95	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	5,5	41	0,09	0,15	13,3	20,272
212	A283-A284	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	1,14	0	4,3	9,09	4,95	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	5,9	41	0,08	0,15	15,1	20,272
213	A285-A286	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	1,14	0	4,3	9,09	4,95	0,70	3,30	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,16	3,30	9,90	cond. verific.	5,9	41	0,08	0,16	11,6	27,464
214	A287-A288	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,7	0	4,7	5,56	1,87	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	1,87	95,93	cond. verific.	4,4	41	0,03	0,15	[redacted]	5,06
5	C47	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,99	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,4	41	0,04	0,15	9,3	5,06
216	A289-A290-A291	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,99	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,3	41	0,04	0,15	8,9	5,06
217	C48	SA234WPB	16,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,69	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	6,8	41	0,01	0,15	15,6	5,05
218	A292-A293-A294	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	0,69	0	4,9	7,11	3,22	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,22	55,09	cond. verific.	5,7	41	0,03	0,15	10,7	5,05
219	A295-A296	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,7	0	3,9	5,56	1,87	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	1,87	14,43	cond. verific.	3,7	41	0,05	0,15	[redacted]	20,321
220	A297-A298	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,7	0	3,9	5,56	1,87	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	1,87	14,43	cond. verific.	3,8	41	0,04	0,15	8,0	20,321
221	A299-A300	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,7	0	3,9	5,56	1,87	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	1,87	14,43	cond. verific.	3,9	41	0,04	0,15	8,4	20,321
222	A301-A302	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	4,8	41	0,04	0,15	10,2	20,272
223	A303-A304	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	4,5	41	0,04	0,15	9,3	20,272
224	A305-A306	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	4,8	41	0,04	0,15	10,2	20,272
225	A307-A308	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	7,0	41	0,04	0,15	16,4	7,5216
226	C49	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	6,0	41	0,06	0,15	12,0	7,5216
227	A309-A310	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	188	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	7,0	41	0,04	0,15	16,4	7,5216
228	A311-A312	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	7,0	41	0,04	0,15	16,4	7,5216
9	A313-A314	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	7,0	41	0,04	0,15	16,4	7,5216
230	C50	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	5,1	41	0,08	0,15	8,0	7,5216
231	A315-A316	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	7,0	41	0,04	0,15	16,4	7,5216
232	C51	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	7,0	41	0,04	0,15	16,4	7,5216
233	A317-A318	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	8,0	41	0,01	0,15	20,9	7,5216
234	C52	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	7,0	41	0,04	0,15	16,4	7,5216
235	A319-A320	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	7,7	41	0,02	0,15	15,6	7,5216
236	A321-A322	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	6,0	41	0,06	0,15	12,0	7,5216
237	C53	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	188	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	5,6	41	0,07	0,15	10,2	7,5216
238	A323-A324	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	6,0	41	0,01	0,15	20,9	7,5216
239	C54	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	7,0	41	0,04	0,15	15,4	7,5216
240	A325-A326	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	7,0	41	0,04	0,15	16,4	7,5216
241	A327-A328	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,7	0	3,9	5,56	1,87	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	1,87	14,43	cond. verific.	4,9	41	0,02	0,15	12,9	20,321
242	A329-A330	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	5,8	41	0,01	0,15	14,7	20,272
243	A331-A332	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	5,9	41	0,01	0,15	15,1	20,272
244	A333-A334	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	5,7	41	0,02	0,15	14,2	20,272
245	A335-A336	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	6,0	41	0,01	0,15	15,6	20,272

LUKOIL OIL COMPANY

TÜV AUSTRIA ROMANIA

BREVIAR DE CALCUL SIS 41

COMANDA		fabricatiei	1975	NR. PAG.	ANEXA III
BENEFICIAR	S.C. PETROTEL-LUKOIL S.A.	REV. 0	DATA 09.2016	DIN	INTOCMIT Cretu G. / VERIFICAT Balind I. / APROBAT Ninca N.
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CARACTERISTICI TEHNICE CONDUCTE — CALCULUL DE DIMENSIONARE LA PRESIUNEA INTERIOARA — CALCULUL PRESIUNII DE INCERCARE — CALCULUL DE VERIFICARE A TENSIUNII EFECTIVE LA PROBA — CALCULUL DURATEI REMANENTE DE VIATA

Nr. crt	SIMBOL	MATERIAL	p_c [bar]	p_c [N/mm²]	DN	D_e [mm]	t [°C]	t_1 [°C]	$R_{p0,2}^{t1}$ [N/mm²]	t_2 [°C]	$R_{p0,2}^{t2}$ [N/mm²]	$R_{p0,2}^{t}$ [N/mm²]	R_m [N/mm²]	f [N/mm²]	z	e [mm]	c_0 [mm]	c_1 [mm]	c_2 [mm]	e_r [mm]	e_{ord} [mm]	e_s [mm]	e' [mm]	gros. min. de inloc. e_{min} [mm]	PSXDN	FLUID PROBA	f_{test} [N/mm²]	R_m' [N/mm²]	$0,95 \cdot R_m'$ [N/mm²]	p_{test} [bar]	p_{test} [bar]	$p_{test\,MAX}$ [bar]	P_{ph} [bar]	σ_{test} ADOPTAT [N/mm²]	p_{test} ADOPTAT [N/mm²]	e_p [mm]	f'_{test} [N/mm²]	$f'_{test} \le 0,95 R_e'$	Gros. min. masurata S0 [mm]	Durata de functionare t [ani]	Vit. de coroz. calc. Vm [mm/an]		Durata remanenta de viata [ani]	P_{max}
247	A339-A340	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	13,42	cond. verific.	6,0	41	0,01	0,15	15,8	20,272
248	A341-A342	SA106-GrA	15,0	1,5	40	48,3	100	65	195	125	186	189,75	330	126,50	1	0,28	3	1,27	0	4,6	10,15	5,88	0,78	2,50	600	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	19,69	cond. verific.	8,0	41	0,05	0,15	24,4	13,81
249	A343-A344	SA106-GrA	15,0	1,5	40	48,3	100	65	195	125	186	189,75	330	126,50	1	0,28	3	1,27	0	4,6	10,15	5,88	0,78	2,50	600	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	19,69	cond. verific.	8,0	41	0,05	0,15	24,4	13,81
250	A345-A346	SA106-GrA	15,0	1,5	40	48,3	100	65	195	125	186	189,75	330	126,50	1	0,28	3	1,27	0	4,6	10,15	5,88	0,78	2,50	600	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	19,69	cond. verific.	8,0	41	0,05	0,15	24,4	13,81
251	A347-A347a	SA106-GrA	15,0	1,5	40	48,3	100	65	195	125	186	189,75	330	126,50	1	0,28	3	1,27	0	4,6	10,15	5,88	0,78	2,50	600	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	19,69	cond. verific.	8,0	41	0,05	0,15	24,4	13,81
252	A348-A349-A350	SA106-GrA	15,0	1,5	40	48,3	100	65	195	125	186	189,75	330	126,50	1	0,28	3	1,27	0	4,6	10,15	5,88	0,78	2,50	600	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	19,69	cond. verific.	8,0	41	0,05	0,15	24,4	13,81
253	A351-A352	SA106-GrA	15,0	1,5	32	42,1	100	65	195	125	186	189,75	330	126,50	1	0,25	3	0,79	0	4,0	6,35	2,56	0,75	2,50	480	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	17,03	cond. verific.	4,1	41	0,05	0,15	[redacted]	15,972
254	A353-A354	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,80	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	13,42	cond. verific.	4,3	41	0,05	0,15	8,0	20,272
255	A355-A356	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	13,42	cond. verific.	4,0	41	0,06	0,15	[redacted]	20,272
	A357-A358	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	13,42	cond. verific.	4,1	41	0,05	0,15	[redacted]	20,272
257	A359-A360	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	13,42	cond. verific.	5,0	41	0,03	0,15	11,1	20,272
258	A361-A362	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	13,42	cond. verific.	4,8	41	0,04	0,15	10,2	20,272
259	A363-A364	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	13,42	cond. verific.	4,7	41	0,04	0,15	9,8	20,272
260	A365-A366	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	13,42	cond. verific.	4,8	41	0,04	0,15	10,2	20,272
261	A367-A368	SA106-GrA	15,0	1,5	25	33,7	100	65	195	120	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	13,42	cond. verific.	4,9	41	0,04	0,15	10,7	20,272
262	A369-A370	[illegible]	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,09	0	5,1	8,74	4,65	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	3,30	53,75	cond. verific.	5,4	41	0,05	0,15	13,8	5,06
263	C55	[illegible]	[illegible]	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,7	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	3,30	53,75	cond. verific.	9,7	41	0,07	0,15	28,4	5,06
264	A371-A372-A373	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,09	0	5,1	8,74	4,65	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	3,30	53,75	cond. verific.	8,6	41	0,05	0,15	14,7	5,06
265	C56	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,7	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	3,30	53,75	cond. verific.	10,1	41	0,06	0,15	30,2	5,06
266	A374-A375	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	3,30	53,75	cond. verific.	7,0	41	0,06	0,15	18,4	5,06
267	C57	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	3,30	53,75	cond. verific.	6,0	41	0,09	0,15	12,0	5,06
268	A376-A377-A378	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,19	0	5,2	9,53	5,34	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	3,30	53,75	cond. verific.	7,5	41	0,05	0,15	18,7	5,06
269	C58	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,08	0	5,1	8,74	4,65	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	3,30	53,75	cond. verific.	6,0	41	0,07	0,15	12,0	5,06
	R17	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,7	8,11	1,48	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	3,30	53,75	cond. verific.	10,5	41	0,05	0,15	32,0	5,06
271	A379-A380	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,7	0	3,9	5,56	1,87	0,65	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	1,87	14,43	cond. verific.	4,1	41	0,04	0,15	9,3	20,321
272	A381-A382	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,7	0	3,9	5,56	1,87	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	1,87	14,43	cond. verific.	4,0	41	0,04	0,15	8,9	20,321
273	A383	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,7	0	3,9	5,56	1,87	0,68	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	1,87	14,43	cond. verific.	4,2	41	0,03	0,15	9,8	20,321
274	A384-A385	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,58	4,51	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	3,30	36,16	cond. verific.	5,0	41	0,09	0,15	[redacted]	7,5216
275	T11	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,58	4,51	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	3,30	36,16	cond. verific.	6,8	41	0,04	0,15	15,6	7,5216
276	A386-A387	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,58	4,51	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	3,30	36,16	cond. verific.	8,0	41	0,06	0,15	12,0	7,5216
277	C59	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,58	4,51	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	3,30	36,16	cond. verific.	6,5	41	0,05	0,15	14,2	7,5216
278	R18	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,58	4,51	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	3,30	36,16	cond. verific.	5,7	41	0,07	0,15	10,7	7,5216
279	A388-A389	SA106-GrA	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	1,19	0	4,5	9,53	5,34	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	24,85	cond. verific.	6,3	41	0,08	0,15	16,9	10,943
280	A390-A391	SA106-GrA	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	1,19	0	4,5	9,53	5,34	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	24,85	cond. verific.	5,3	41	0,10	0,15	12,4	10,943
281	C60	SA234WPB	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	1,19	0	4,5	9,53	5,34	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	24,85	cond. verific.	7,1	41	0,06	0,15	20,4	10,943
282	C61	SA234WPB	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	1,19	0	4,5	9,53	5,34	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	24,85	cond. verific.	6,0	41	0,09	0,15	15,6	10,943
283	A392-A393	SA106-GrA	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	1,19	0	4,5	9,53	5,34	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	24,85	cond. verific.	5,0	41	0,11	0,15	11,1	10,943
	C62	SA234WPB	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	1,19	0	4,5	9,53	5,34	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	24,85	cond. verific.	6,2	41	0,08	0,15	16,4	10,943
	A394-A395	SA106-GrA	15,0	1,5	50	60,3	100	65	195	125	186	189,75	330	126,50	1	0,36	3	1,19	0	4,5	9,53	5,34	0,86	2,50	750	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	24,85	cond. verific.	5,2	41	0,11	0,15	12,0	10,943
	R19	SA234WPB	15,0	1,5	80	88,9	100	65	195	125	186	189,75	330	126,50	1	0,52	3	0,89	0	4,4	7,14	3,25	1,02	2,50	1200	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5	21,5	2,15	2,50	37,15	cond. verific.	5,0	41	0,05	0,15	11,1	7,3296

LUKOIL OIL COMPANY — TÜV AUSTRIA ROMANIA

BREVIAR DE CALCUL SIS 41

COMANDA		Anul fabricatiei	1975	NR.		ANEXA III	
BENEFICIAR	S.C. PETROTEL-LUKOIL S.A.			PAG		DIN	
INSTALATIA	HPM			REV	DATA	INTOCMIT	VERIFICAT	APROBAT
				0	09.2016	Cretu G.	Balind I.	Ninca N.
				1				
				2				

CARACTERISTICI TEHNICE CONDUCTE / CALCULUL DE DIMENSIONARE LA PRESIUNEA INTERIOARA / CALCULUL PRESIUNII DE INCERCARE / CALCULUL DE VERIFICARE A TENSIUNII EFECTIVE IN PROBA / CALCULUL DURATEI REMANENTE DE VIATA

Nr.	SIMBOL	MATE-RIAL	p_c [bar]	p_c [N/mm²]	DN	D_e [mm]	t [°C]	t_1 [°C]	$R_{p0,2}^{t1}$ [N/mm²]	t_i [°C]	$R_{p0,2}^{ti}$ [N/mm²]	$R_{p0,2}^{t}$ [N/mm²]	R_m [N/mm²]	f [N/mm²]	z	a [mm]	c_0 [mm]	c_1 [mm]	c_2 [mm]	e_1 [mm]	e_{ord} [mm]	e_a [mm]	e' [mm]	gros. min. de inloc. e_{min} [mm]	PSXDN	FLUID PROBA	f_{test} [N/mm²]	R_m' [N/mm²]	$0,95 \cdot R_m'$ [N/mm²]	P_{testA} [bar]	P_{testB} [bar]	$P_{test\,MAX}$ [bar]	P_{ph} [bar]		P_{test} ADOPTAT [N/mm²]	P_{ad} ADOPTAT [N/mm²]	e_p [mm]	f^t_{test} [N/mm²]	$f_{test} \leq 0,95Re_x^t$	Gros. min. masurata S0 [mm]	Durata de functionare, t [ani]	Vit. de coroz. calc. Vm [mm/an]		Durata reman. de viata [ani]
288	C63	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,37	0	5,4	10,97	6,6	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	6,1	41	0,07	0,15	21,3
289	A395-A397	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,37	0	5,4	10,97	6,6	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	8,3	41	0,07	0,15	22,2
290	T12	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,37	0	5,4	10,97	6,6	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	8,3	41	0,07	0,15	22,2
291	R21	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,37	0	5,4	10,97	6,6	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	8,4	41	0,06	0,15	22,7
292	R22	SA234WPB	15,0	1,5	80	88,9	100	65	195	125	186	189,75	330	126,50	1	0,52	3	0,95	0	4,5	7,82	3,67	1,02	2,50	1200	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	37,15	cond. verific.	6,0	41	0,04	0,15	15,6
293	R23	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	2,32	0	6,0	18,56	13,2	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	7,6	41	0,27	0,27	10,7
294	A398-A399	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,98	0	4,1	7,82	3,84	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	13,38	cond. verific.	4,0	41	0,09	0,15	8,9
295	A400	SA106-GrA	15,0	1,5	20	25,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,98	0	4,1	7,82	3,84	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,00	13,38	cond. verific.	4,3	41	0,09	0,15	10,2
296	R24	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,7	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	10,1	41	0,06	0,15	30,2
	A401-A402	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	7,0	41	0,04	0,15	16,4
298	C64	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	7,0	41	0,04	0,15	15,4
299	A403-A404	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	8,0	41	0,01	0,15	20,9
300	C65	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	7,0	41	0,04	0,15	16,4
301	A405-A406-A407	SA106-GrA	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,07	0	4,7	8,56	4,49	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	8,0	41	0,01	0,15	20,9
302	R25	SA234WPB	15,0	1,5	100	114,3	100	65	195	125	186	189,75	330	126,50	1	0,67	3	1,39	0	5,1	11,13	6,74	1,17	3,30	1500	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	36,16	cond. verific.	8,3	41	0,07	0,15	22,2
303	A408-A409	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,7	0	3,9	5,56	1,87	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	1,87	14,43	cond. verific.	4,2	41	0,03	0,15	9,8
304	A410	SA106-GrA	15,0	1,5	20	26,9	100	65	195	125	186	189,75	330	126,50	1	0,16	3	0,7	0	3,9	5,56	1,87	0,66	2,00	300	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	1,87	14,43	cond. verific.	4,5	41	0,03	0,15	11,1
305	A411-A412	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,70	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	9,3	41	0,08	0,15	26,7
306	C66	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,70	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	10,0	41	0,07	0,15	29,8
307	A413-A414	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,70	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	10,1	41	0,06	0,15	30,2
308	C67	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,70	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	10,1	41	0,06	0,15	30,2
309	A415-A416-A417	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,70	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	11,4	41	0,03	0,15	36,0
310	A418-A419-A420	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,70	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	11,2	41	0,04	0,15	35,1
	C68	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,70	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	8,5	41	0,10	0,15	23,1
312	C69	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,70	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	9,0	41	0,08	0,15	25,3
313	A421-A422-A423	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,70	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	11,2	41	0,04	0,15	35,1
314	A424-A425	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,70	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	11,3	41	0,03	0,15	35,6
315	C70	SA234WPB	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,70	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,6	2,15	3,30	53,75	cond. verific.	9,6	41	0,08	0,15	28,0
316	A426-A427	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	3,7	41	0,06	0,15	[redacted]
317	A428-A429	SA106-GrA	15,0	1,5	25	33,7	100	65	185	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	3,5	41	0,07	0,15	[redacted]
318	A430	SA106-GrA	15,0	1,5	25	33,7	100	65	195	125	186	189,75	330	126,50	1	0,20	3	0,79	0	4,0	6,35	2,56	0,70	2,50	375	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	2,50	13,42	cond. verific.	3,7	41	0,06	0,15	[redacted]
319	A431-A432	SA106-GrA	15,0	1,5	150	168,3	100	65	195	125	186	189,75	330	126,50	1	0,99	3	1,59	0	5,6	12,70	8,11	1,49	3,30	2250	Apa	136,667	205	194,750	20,257	21,450	21,450	21,5		21,5	2,15	3,30	53,75	cond. verific.	11,2	41	0,04	0,15	35,1

Vit. de coroz. calculata Vm	Vit. de coroz. adopt. Vm		Durata remanenta de viata
0,07	0,15		8,0

Se poate adopta durata de viata 8 ani cu conditia inlocuirii urmatoarelor elemente: A287-A288, A428-A429 dupa 4 ani; C27, A426-A427, A430 dupa 5 ani; A121-A122, A277-A278, A355-A356 dupa 6 ani; C23, A116-A117-A188, A119-A120, A178-A179, A184-A185, A189-A190, A295-A296, A351-A352, A357-A358, A384-A385 dupa 7 ani.

LEGENDA

p_c – presiunea de calcul, N/ mm²
Do – diametrul exterior al țevii, mm
Di – diametrul interior al țevii, mm
f_a – rezistența admisibilă, N/mm2
ReH – limita de curgere superioară la temperatura de calcul, N/mm2
Rp0,2 – limita de curgere convențională la temperatura de calcul, N/mm2
Rm – rezistența de rupere la tracțiune la temperatura de 20°C, N/mm2