

INSTRUMENT DATA SHEET PRESSURE GAUGES

			<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	
01	15.02.2018	Emis pentru Ofertare	V. Voicu	P. Teodorescu	B. Sarluceanu	
REV	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED	APPROVED COMPANY
			ORIGINATOR			
		PROJECT NAME:				
		MODERNIZARE SI RECONSTRUCTIE RAMPA DE INCARCARE PRODUSE PETROLIERE IN CISTERNE AUTO				
		PROJECT NUMBER:				
		ROT00052-01				
 		PROJECT PHASE:			REVISION	
		DDE			01	
		DOCUMENT NUMBER:			SHEET	
		ROT00052-01-4393001			1 OF 5	



INSTRUMENT DATA SHEET

DATA SHEET NO.:

ROT00052-01-
4393001

REV.

01

PRESSURE GAUGES

SHEET 2 OF 5

BY

V. Voicu

CHK'D

P. Teodorescu

APPR.

B. Sarluceanu

PROJECT NO.: ROT00052-01

OWNER: S.C. Petrotel Lukoil S.A.

PLANT: Rampa incarcare auto

REV	DATE	NAME	SIGNATURE	REV	DATE	NAME	SIGNATURE
01	15.02.2018	V. Voicu					
GENERALITIES	1	TAG NUMBER:	PI-007	PI-008	PI-011		
	2	P&ID NUMBER:	ROT00052 01-3143001	ROT00052 01-3143001	ROT00052 01-3143002		
	3	LINE/EQUIPMENT NUMBER:	PM-03-300-25C1	PM-04-200-25C1	PM-11-300-25C1		
	4	SERVICE:	Pressure Indication	Pressure Indication	Pressure Indication		
	5	MANUFACTURER:	(2)	(2)	(2)		
	6	MODEL/PART NO.:	(2)	(2)	(2)		
	7	HAZARDOUS AREA CLASSIFICATION:	Zone 2	Zone 2	Zone 2		
PROCESS CONDITIONS	8	FLUID:	Gas Oil	Gas Oil	Gas Oil		
	9	CORROSIVE COMPOUNDS: (1)	N/A	N/A	N/A		
	10		MIN. NORMAL MAX	MIN. NORMAL MAX	MIN. NORMAL MAX		
	11	OPERATING PRESSURE: barg	0,01 0,3 0,75	4 6 8	0,01 0,3 0,75		
	12	OPERATING TEMPERATURE: °C	-15 35 60	-15 35 60	-15 35 60		
	13	DESIGN PRESSURE: DESIGN TEMPERATURE	3,5 75	10 75	3,5 75		
	14	AMBIENT TEMPERATURE: °C	-29.6 ÷ 40.6	-29.6 ÷ 40.6	-29.6 ÷ 40.6		
GAUGE DETAILS	15	TYPE:	Direct reading	Direct reading	Direct reading		
	16	RANGE: barg	0 ÷ 1	0 ÷ 10	0 ÷ 1		
	17	MOUNTING:	Local	Local	Local		
	18	DIAL DIAMETER:	160 mm	160 mm	160 mm		
	19	DIAL COLOR MARKING COLOR	White Black	White Black	White Black		
	20	WINDOW MATERIAL:	Safety glass	Safety glass	Safety glass		
	21	CASE MATERIAL:	Stainless Steel	Stainless Steel	Stainless Steel		
	22	BLOWOUT PROTECTION:	Back	Back	Back		
	23	ELEMENT TYPE:	Bourdon	Bourdon	Bourdon		
	24	ELEMENT MATERIAL:	AISI 316L SS	AISI 316L SS	AISI 316L SS		
	25	SOCKET MATERIAL:	AISI 316L SS	AISI 316L SS	AISI 316L SS		
	26	MOVEMENT MATERIAL:	Stainless Steel	Stainless Steel	Stainless Steel		
	27	PROCESS CONNECTION LOCATION	1/2" NPT-M Bottom	1/2" NPT-M Bottom	1/2" NPT-M Bottom		
	28	MOVEMENT DAMPING:	Yes	Yes	Yes		
	29	FILL FLUID:	Silicone	Silicone	Silicone		
	30	ACCURACY:	± 1%	± 1%	± 1%		
	31	ATEX CATEGORY / EPL:	II 3G / Gc	II 3G / Gc	II 3G / Gc		
	32	TYPE OF PROTECTION:	VTA	VTA	VTA		
	33	INGRESS PROTECTION:	IP65	IP65	IP65		
MANIFOLD	34	MANUFACTURER:	(2)	(2)	(2)		
	35	MODEL/PART NO.:	(2)	(2)	(2)		
	36	TYPE:	2 valve	2 valve	2 valve		
	37	BODY MATERIAL:	AISI 316L SS	AISI 316L SS	AISI 316L SS		
	38	PROCESS CONN. AND SIZE:	1/2" NPT (F)	1/2" NPT (F)	1/2" NPT (F)		
	39	VENT CONNECTION AND SIZE:	1/4" NPT(F)	1/4" NPT(F)	1/4" NPT(F)		
	40	MANIFOLD MOUNTING:	Directly to pressure gauge	Directly to pressure gauge	Directly to pressure gauge		
ACCESSORIES	41	SNUBBER:	No	No	No		
	42	SNUBBER MATERIAL:	N/A	N/A	N/A		
	43	SNUBBER CONNECTION:	N/A	N/A	N/A		
	44	SYPHON:	No	No	No		
	45	SYPHON MATERIAL:	N/A	N/A	N/A		
	46	SYPHON CONNECTION:	N/A	N/A	N/A		
	47	OVER RANGE PROTECTOR:	No	No	No		
	48	OVER RANGE PROTECTOR MATERIAL:	N/A	N/A	N/A		
	49	OVER RANGE PROTECTOR CONN.:	N/A	N/A	N/A		
	50	OVER RANGE PROTECTOR SETTING:	N/A	N/A	N/A		
	51	SUNSHADE:	No	No	No		
	52	WINTERIZATION:	Not required	Not required	Not required		
	53	CONTACTS:	No	No	No		
	54	TYPE OF CONTACTS:	N/A	N/A	N/A		
	55	NUMBER OF CONTACTS:	N/A	N/A	N/A		

 		INSTRUMENT DATA SHEET				DATA SHEET NO.: ROT00052-01- 4393001		REV. 01		
		PRESSURE GAUGES				SHEET 2 OF 5				
		BY V. Voicu		CHK'D P. Teodorescu		APPR. B. Sarluceanu				
PROJECT NO.: ROT00052-01		REV	DATE	NAME	SIGNATURE	REV	DATE	NAME	SIGNATURE	
OWNER: S.C. Petrotel Lukoil S.A.		01	15.02.2018	V. Voicu						
PLANT: Rampa incarcare auto										
GENERALITIES	1	TAG NUMBER:		PI-012		PI-015		PI-016		
	2	P&ID NUMBER:		ROT00052-01-3143002		ROT00052-01-3143003		ROT00052-01-3143003		
	3	LINE/EQUIPMENT NUMBER:		PM-12-200-25C1		PB-01-300-25C1		PB-02-200-25C1		
	4	SERVICE:		Pressure Indication		Pressure Indication		Pressure Indication		
	5	MANUFACTURER:		(2)		(2)		(2)		
	6	MODEL/PART NO.:		(2)		(2)		(2)		
	7	HAZARDOUS AREA CLASSIFICATION:		Zone 2		Zone 2		Zone 2		
PROCESS CONDITIONS	8	FLUID:		Gas Oil		Gasoline		Gasoline		
	9	CORROSIVE COMPOUNDS: (1)		N/A		N/A		N/A		
	10			MIN.	NORMAL	MAX.	MIN.	NORMAL	MAX.	
	11	OPERATING PRESSURE: barg		4	6	8	0,01	0,3	0,7	4
	12	OPERATING TEMPERATURE: °C		-15	35	60	-15	35	40	-15
	13	DESIGN PRESSURE: DESIGN TEMPERATURE		10	75	3,5	75	10	75	
	14	AMBIENT TEMPERATURE: °C		-29.6 ± 40.6		-29.6 ± 40.6		-29.6 ± 40.6		
GAUGE DETAILS	15	TYPE:		Direct reading		Direct reading		Direct reading		
	16	RANGE: barg		0 ÷ 10		0 ÷ 1		0 ÷ 10		
	17	MOUNTING:		Local		Local		Local		
	18	DIAL DIAMETER:		160 mm		160 mm		160 mm		
	19	DIAL COLOR	MARKING COLOR	White	Black	White	Black	White	Black	
	20	WINDOW MATERIAL:		Safety glass		Safety glass		Safety glass		
	21	CASE MATERIAL:		Stainless Steel		Stainless Steel		Stainless Steel		
	22	BLOWOUT PROTECTION:		Back		Back		Back		
	23	ELEMENT TYPE:		Bourdon		Bourdon		Bourdon		
	24	ELEMENT MATERIAL:		AISI 316L SS		AISI 316L SS		AISI 316L SS		
	25	SOCKET MATERIAL:		AISI 316L SS		AISI 316L SS		AISI 316L SS		
	26	MOVEMENT MATERIAL:		Stainless Steel		Stainless Steel		Stainless Steel		
	27	PROCESS CONNECTION	LOCATION	1/2" NPT-M	Bottom	1/2" NPT-M	Bottom	1/2" NPT-M	Bottom	
	28	MOVEMENT DAMPING:		Yes		Yes		Yes		
	29	FILL FLUID:		Silicone		Silicone		Silicone		
	30	ACCURACY:		± 1%		± 1%		± 1%		
	31	ATEX CATEGORY / EPL:		II 3G / Gc		II 3G / Gc		II 3G / Gc		
	32	TYPE OF PROTECTION:		VTA		VTA		VTA		
	33	INGRESS PROTECTION:		IP65		IP65		IP65		
MANIFOLD	34	MANUFACTURER:		(2)		(2)		(2)		
	35	MODEL/PART NO.:		(2)		(2)		(2)		
	36	TYPE:		2 valve		2 valve		2 valve		
	37	BODY MATERIAL:		AISI 316L SS		AISI 316L SS		AISI 316L SS		
	38	PROCESS CONN. AND SIZE:		1/2" NPT (F)		1/2" NPT (F)		1/2" NPT (F)		
	39	VENT CONNECTION AND SIZE:		1/4" NPT(F)		1/4" NPT(F)		1/4" NPT(F)		
	40	MANIFOLD MOUNTING:		Directly to pressure gauge		Directly to pressure gauge		Directly to pressure gauge		
ACCESSORIES	41	SNUBBER:		No		No		No		
	42	SNUBBER MATERIAL:		N/A		N/A		N/A		
	43	SNUBBER CONNECTION:		N/A		N/A		N/A		
	44	SYPHON:		No		No		No		
	45	SYPHON MATERIAL:		N/A		N/A		N/A		
	46	SYPHON CONNECTION:		N/A		N/A		N/A		
	47	OVER RANGE PROTECTOR:		No		No		No		
	48	OVER RANGE PROTECTOR MATERIAL:		N/A		N/A		N/A		
	49	OVER RANGE PROTECTOR CONN.:		N/A		N/A		N/A		
	50	OVER RANGE PROTECTOR SETTING:		N/A		N/A		N/A		
	51	SUNSHADE:		No		No		No		
	52	WINTERIZATION:		Not required		Not required		Not required		
	53	CONTACTS:		No		No		No		
	54	TYPE OF CONTACTS:		N/A		N/A		N/A		
	55	NUMBER OF CONTACTS:		N/A		N/A		N/A		



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PRESSURE GAUGES

SHEET 2 OF 5

BY

V. Voicu

CHK'D

P. Teodorescu

APPR.

B. Sarluceanu

PROJECT NO.: ROT00052-01

OWNER: S.C. Petrotel Lukoil S.A.

PLANT: Rampa incarcare auto

			REV	DATE	NAME	SIGNATURE	REV	DATE	NAME	SIGNATURE
			01	15.02.2018	V. Voicu					
GENERALITIES	1	TAG NUMBER:	PI-019			PI-020				
	2	P&ID NUMBER:	ROT00052 01-3143004			ROT00052 01-3143004				
	3	LINE/EQUIPMENT NUMBER:	PB-11-300-25C1			PB-12-200-25C1				
	4	SERVICE:	Pressure Indication			Pressure Indication				
	5	MANUFACTURER:	(2)			(2)				
	6	MODEL/PART NO.:	(2)			(2)				
	7	HAZARDOUS AREA CLASSIFICATION:	Zone 2			Zone 2				
PROCESS CONDITIONS	8	FLUID:	Gasoline			Gasoline				
	9	CORROSIVE COMPOUNDS: (1)	N/A			N/A				
	10		MIN	NORMAL	MAX	MIN	NORMAL	MAX		
	11	OPERATING PRESSURE: barg	0,01	0,3	0,7	4	6	8		
	12	OPERATING TEMPERATURE: °C	-15	35	40	-15	35	40		
	13	DESIGN PRESSURE: DESIGN TEMPERATURE	3,5	75		10	75			
	14	AMBIENT TEMPERATURE: °C	-29.6 ± 40.6			-29.6 ± 40.6				
GAUGE DETAILS	15	TYPE:	Direct reading			Direct reading				
	16	RANGE: barg	0 ÷ 1			0 ÷ 10				
	17	MOUNTING:	Local			Local				
	18	DIAL DIAMETER:	160 mm			160 mm				
	19	DIAL COLOR MARKING COLOR	White	Black		White	Black			
	20	WINDOW MATERIAL:	Safety glass			Safety glass				
	21	CASE MATERIAL:	Stainless Steel			Stainless Steel				
	22	BLOWOUT PROTECTION:	Back			Back				
	23	ELEMENT TYPE:	Bourdon			Bourdon				
	24	ELEMENT MATERIAL:	AISI 316L SS			AISI 316L SS				
	25	SOCKET MATERIAL:	AISI 316L SS			AISI 316L SS				
	26	MOVEMENT MATERIAL:	Stainless Steel			Stainless Steel				
	27	PROCESS CONNECTION LOCATION	1/2" NPT-M	Bottom		1/2" NPT-M	Bottom			
	28	MOVEMENT DAMPING:	Yes			Yes				
	29	FILL FLUID:	Silicone			Silicone				
	30	ACCURACY:	± 1%			± 1%				
	31	ATEX CATEGORY / EPL:	II 3G / Gc			II 3G / Gc				
	32	TYPE OF PROTECTION:	VTA			VTA				
	33	INGRESS PROTECTION:	IP65			IP65				
MANIFOLD	34	MANUFACTURER:	(2)			(2)				
	35	MODEL/PART NO.:	(2)			(2)				
	36	TYPE:	2 valve			2 valve				
	37	BODY MATERIAL:	AISI 316L SS			AISI 316L SS				
	38	PROCESS CONN. AND SIZE:	1/2" NPT (F)			1/2" NPT (F)				
	39	VENT CONNECTION AND SIZE:	1/4" NPT(F)			1/4" NPT(F)				
	40	MANIFOLD MOUNTING:	Directly to pressure gauge			Directly to pressure gauge				
ACCESSORIES	41	SNUBBER:	No			No				
	42	SNUBBER MATERIAL:	N/A			N/A				
	43	SNUBBER CONNECTION:	N/A			N/A				
	44	SYPHON:	No			No				
	45	SYPHON MATERIAL:	N/A			N/A				
	46	SYPHON CONNECTION:	N/A			N/A				
	47	OVER RANGE PROTECTOR:	No			No				
	48	OVER RANGE PROTECTOR MATERIAL:	N/A			N/A				
	49	OVER RANGE PROTECTOR CONN.:	N/A			N/A				
	50	OVER RANGE PROTECTOR SETTING:	N/A			N/A				
	51	SUNSHADE:	No			No				
	52	WINTERIZATION:	Not required			Not required				
	53	CONTACTS:	No			No				
	54	TYPE OF CONTACTS:	N/A			N/A				
	55	NUMBER OF CONTACTS:	N/A			N/A				



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PRESSURE GAUGES

SHEET 5 OF 5
BY V. Voicu
CHK'D P. Teodorescu
APPR. B. Sarluceanu

PROJECT NO.: ROT00052-01
OWNER: S.C. Petrotel Lukoil S.A.
PLANT: Rampa incarcare auto

REV	DATE	NAME	SIGNATURE	REV	DATE	NAME	SIGNATURE
01	15.02.2018	V. Voicu					



FIG 1 SURFACE
MOUNTING



FIG 2 FLUSH
MOUNTING



FIG 3 BOTTOM
CONNECTION



FIG 4 SIDE
CONNECTION



FIG 5 TOP
CONNECTION



FIG 6 CENTER/LOWER BACK
CONNECTION

NOTES:

1. LIST OF CORROSIVE COMPOUNDS: N/A
2. DATA TO BE PROVIDED / CONFIRMED BY VENDOR.
3. FOR ALL PRESSURE GAUGES ARE REQUIRED INSPECTION CERTIFICATE SR EN 10204.
4. ALL INSTRUMENTS SHALL BE DELIVERED WITH CONFORMITY CERTIFICATION AND CE MARKED ACCORDING TO THE APPLICABLE DIRECTIVES.
5. EACH PRESSURE GAUGE SHALL BE PROPERLY IDENTIFIED WITH A STAINLESS STEEL PLATE FASTENED TO THE INSTRUMENT SHOWING THE TAG NUMBER.
6. COMPLIANCE TO SR EN 837.1 IS REQUIRED.
7. PRESSURE GAUGES SHALL BE SUITABLE FOR PRESSURES OF 1.3 x MAXIMUM STATED DESIGN PRESSURE.