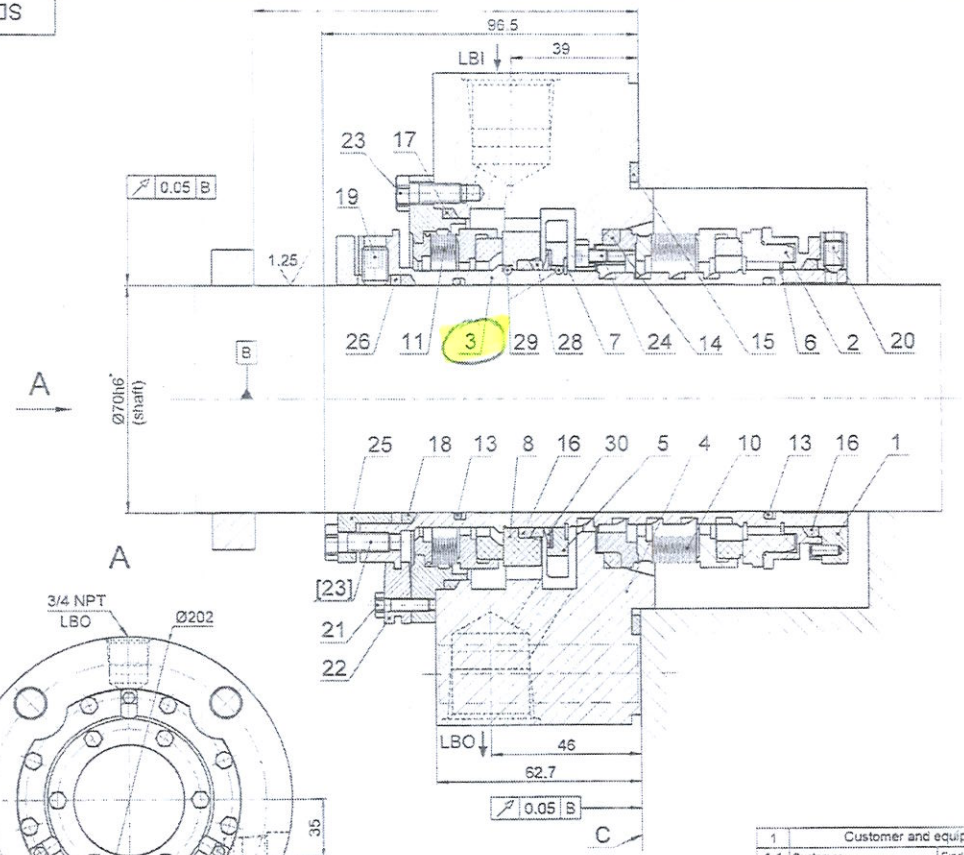
DAIS-0452-29.06.18

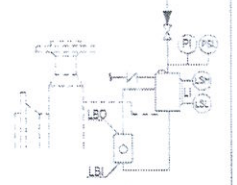
SD2-0700-7949

		Version 1
For offer		Date: 20.03.2012
For approval		Coordinated Date:
Final for delivery	X	Approved Data:



Description:
LBI - liquid buffer inlet;
LBO - liquid buffer outlet;
FI - flush inlet;
PI - pressure indicator;
PSL - pressure switch low;
LI - level indicator;
LSH - level switch high;
LSL - level switch low.

PIPING REQUIREMENTS



Plan 53A

Pressurized external barrier fluid reservoir supplying clean fluid to the outer seal of an Arrangement 3 seal. Circulation is by an internal pumping ring. Reservoir pressure is greater than the process pressure being sealed.

Item	Part No	Description	Q-ty	Material	Spares	Q-ty
1	45975	Clamp ring	1	AISI304		
2	45905	Face assembly	1	42N/S-SiC	*	1
3	45976	Sleeve	1	2Cr13		
4	28468	Gland	1	AISI304		
5	5906	Impeller	1	2Cr13		
6	21776	Snap ring	1	AISI302	*	1
7	5915	Snap ring	1	AISI302	*	1
8	6191	Mating ring	1	R-SiC	*	1
10	23889	Bellows assembly	1	TC/42N/IN718/AISI316	*	1
11	21486	Bellows assembly	1	TC/42N/IN718/AISI316	*	1
12	20652	Pin	1	A4		
13	4119	O-Ring	2	Viton	*	2
14	5910	Gasket	1	Graphite	*	1
15	4294	Gasket	1	AISI316/Graphite	*	1
16	5903	Gasket	2	Graphite	*	2
17	5909	Gasket	1	Graphite	*	1
18	5901	Gasket	1	Graphite	*	1
19	4877	Screw	6	A2	*	6
20	19621	Screw	9	A2	*	9
21	24017	Screw	3	A2	*	3
22	20086	Clip	3	2Cr13		
23	4879	Screw	14	A2	*	14
24	22972	Screw	4	A2	*	4
26	21781	Clamp ring	1	2Cr13		
27	5900	Ring	1	2Cr13		
28	5904	Ring	1	2Cr13		
29	5158	Ball	2	AISI304	*	2
30	5914	Wave spring	1	PH17-7	*	1

1	Customer and equipment data	
1.1	Customer	Finder
1.2	End user	Lukoil-Petrotel
1.3	Unit	
1.4	Equipment item number	01-P14A/R
1.5	Equipment type	
1.6	Equipment model	3X5 HPP124
1.7	Project No	
1.8	Seal Chamber	
1.9	Order N. date	
2	Working conditions	
2.1	RPM	3000
2.2	Liquid	HVGO
2.3	Temperature, °C	378/ 400
2.4	Viscosity, cP	1.64
2.5	Density, kg/m³	841
2.6	Suction pressure, bar(g)	0.5
2.7	Discharge pressure, bar(g)	14
2.8	Seal chamber pressure, bar(g)	5
2.9	Saturation pressure, bar(a)	0.1
3	Auxiliary	
3.1	API 682 Plans	53A
3.2	Buffer liquid	
3.3	Orifice hole, mm	
3.4	Drawing of plans	

Notes:

1. Mechanical seal is supplied tested and securely packaged ready for installation.
2. * - Check dimensions before installation.
3. Before mounting the seal install plugs as required.Use suitable thread sealant such as Loctite-542, PTFE thread sealing cord, or similar material.
4. Before the installation make sure that the surface C is clean and free of scratches and lugs.
5. When tighten nuts of gland studs make sure that the gland fit the surface C of the pump completely without the gap all around the full circle.
6. Tighten gland nuts by approximate torque 100 N*m (not less) to compress gasket item 15.
7. Tighten set screws item 19 equally crosswise, in 4 steps. Final torque: 15 N*m.
8. Tighten screws item [23] first equally crosswise by torque 2.5-3.5 N*m, then in circle, in 3 steps, to 5-7 N*m.
9. Remove clips Item 22 before start-up.
10. Do not start-up pump with tank without barrier fluid.
11. Maximum axial movement (design) ± 2.5 mm.
12. Install clips item 22. before removing seal.

		Signature	Date
Designed	Fedorova		23.04.12
Checked	Nechiporenko		25.04.12
Approved	Batenko		26.04.12

SD2-0700-7949

Mechanical seal
Installation drawing and parts list

Mass	Scale
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JSC TREM Engineering