


Lampiran 1


IMO Crewlist

	IMO CREWLIST	PILOG-N-17
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Name of ship PUPUK INDONESIA	IMO number 9034717
Call sign YBBU2	GT / NRT 18360 / 5508
Type Gas carrier	LOA / LBP 159.98 m / 152,52 m
Flag State of ship Indonesia	Engine Propulsion Power 18200 HP

No.	Family name, given names	Rank or rating	Nationality	Date and place of birth	Nature and number of identity document
1.	Christophorus Suitela	Master	INDONESIA	Ambon, 22 Agustus 1962	D 026606 / 02 DES 2017
2.	Welly Mapanggih	Chief Officer	INDONESIA	Klaten 14 Juni 1980	A 027082/11 FEB 2020
3.	Mukhlis Utami Nugraha	2 nd Officer	INDONESIA	Tasikmalaya, 17Oktober 1989	X 082182/10OCT2017
4.	Bambang Prasetyo	3 rd Officer	INDONESIA	Padang, 24 Februari 1992	A 026473 / 01 MAY 2017
5.	Eko Hermariyanto	Boatswain	INDONESIA	Surakarta, 23 Januari 1978	W 062617 / 16 NOV 2016
6.	Puji Harjanto	Able seaman-1	INDONESIA	Denpasar, 13 Mei 1968	D 013604 / 03 NOV 2017
7.	Priyono	Able seaman-2	INDONESIA	Madiun, 10 September 1980	W 050210 / 25 JUN 2016
8.	Sucipto	Able seaman-3	INDONESIA	Pati, 07 Mei 1985	D 042839 / 09 FEB 2018
9.	Febri Rutanto	Ordinary seaman	INDONESIA	Lamongan, 12 Maret 1994	B 031763 / 07 JAN 2018
10.	Herwan Wahyudi	Chief Cook	INDONESIA	Kerinjing, 14 Maret 1980	C 069588 / 16 SEP 2017
11.	Idham Syafrudin	Steward	INDONESIA	Palembang, 16 Juli 1975	E 045604 / 28 DES 2018
12.	Tribuana Wartabone	Chief Engineer	INDONESIA	Jakarta, 04 Juli 1963	A 027042/ 27 MAR 2017
13.	Afrizal	2 nd Engineer	INDONESIA	Solok, 22 April 1963	Y 055773 / 13 DEC 2016
14.	Joko Purnomo	3 rd Engineer	INDONESIA	Sragen, 1 Feb 1983	Y 086464/16 NOV 2016
15.	Aditya Tri Prayogo	4 th Engineer	INDONESIA	Semarang,12 Oktober 1988	W056489/ 09 AUG 2017
16.	Sugeng Iswahyudi	Cargo Eng	INDONESIA	Malang,10 Sep 1981	Y 055085/29 JUN 2018
17.	Yudhi Meirizal	Electrician	INDONESIA	Banda Aceh, 22 May 1973	Y 004741 / 13 SEPT 2018
18.	Maksum	Engine Forman	INDONESIA	Surabaya, 18 Juni 1957	Y 002298 / 11 NOV 2017
19.	Heri Siswanto	Pump Man 2	INDONESIA	Blitar, 14 April 1968	W 056688 / 12 AUG 2016
20.	Eka Permana	Oiler-1	INDONESIA	Jakarta, 25 Oktober 1973	C 068822/ 06 JUN 2017
21.	Frاندika Ebi Sanjaya	Oiler-2	INDONESIA	Medan, 04 November 1989	Y 072319 / 06 DEC 2017
22.	Suroso Bin Sarim	Oiler-3	INDONESIA	Palembang, 11 Agustus 1953	Y 000806 / 05 DEC 2017
23.	Nugroho Yuniarto	Deck App	INDONESIA	Semarang, 07 Juni 1994	D 075097 / 08 JUN 2018
24.	Mochammad Yuki	Deck App	INDONESIA	Jakarta, 11 Januari 1996	D 060630 / 22 APR 2018
25.	Eka Setia Budi	Engine App	INDONESIA	Purbalingga, 11 Maret 1995	D 075249 / 24 JUN 2018
26.	Yaritsul Firdaus	Engine App	INDONESIA	Jakarta, 09 November 1995	D 060725 / 22 APR 2018

12. Date and signature by master, authorized agent or officer

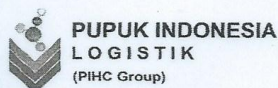


MASTER
117 PUPUK INDONESIA
Call Sign YBBU2
Port Registry JAKARTA


Capt.Christophorus Suitela

Lampiran 2

Ship particular



SHIP PARTICULAR	
Vessel Name	Pupuk Indonesia
Type	Gas Carrier
Flag	Indonesia
Registry	Jakarta
Call Sign	YBBU2
I.M.O. Number	9034717
GMDSS Sea Area Coverage	A1, A2, A3
LOA	159.98 Meters
LBP	152.52 Meters
Breadth	25.60 Meters
Depth	16.40 Meters
Maximum Ht Keel-Mast	47.0 Meters
Summer Draft	10.92 Meters
Summer Deadweight	23256 Metric Tons
Summer Displacement	33312.2 Metric Tons
Light Ship	10054.6 Metric Tons
Gross Tonnage	18360.0 T
Net Tonnage	5508.0 T
Tonnage of Segregated Ballast	2721.0 T
Panama Net Tonnage/Gross Tonnage	13891.0 MT/18946 MT
Suez Canal Net Tonnage/ GRT	15579.21 MT/ 19500.86 MT
Cargo Tank Capacity 100% Vol.	20170.17 cubic meters (including dome)
Cargo Tank Capacity 98% Vol.	20286.166 cubic meters
Deck Tank Capacity 100% Vol.	210.0 cubic meters
Fuel Capacity - HFO/MGO 100% Vol.	2902 cubic meters/ 316.5 cubic meters
Fresh Water Tank Capacity 100% Vol.	362.1 cubic meters
Ballast Tank Capacity 100% Vol.	9191.5 cubic meters
Vessel Classification Society	Bureau Veritas
Class Annotation	I (HULL (MACH-Liquefied Gas Carrier Unrestricted Navigation (AUT-UMS)
Classification ID Nos	16581A
Date Keel Laid	31.10.1992
Date Launched	07.02.1993
Date Delivered	05.01.1994
Yard Built	Hyundai heavy Industries, Ulsan, S.Korea
Main Engine/BHP	MAN B&W Type 7L60MC


MT PUPUK INDONESIA
 Call Sign : YBBU2
 Port Registry : JAKARTA
MASTER

Lampiran 3

Gambar 1 *Compressor room*



Gambar 2 *Compressor*



Lampiran 4

Gambar 3 *Sitting valve*



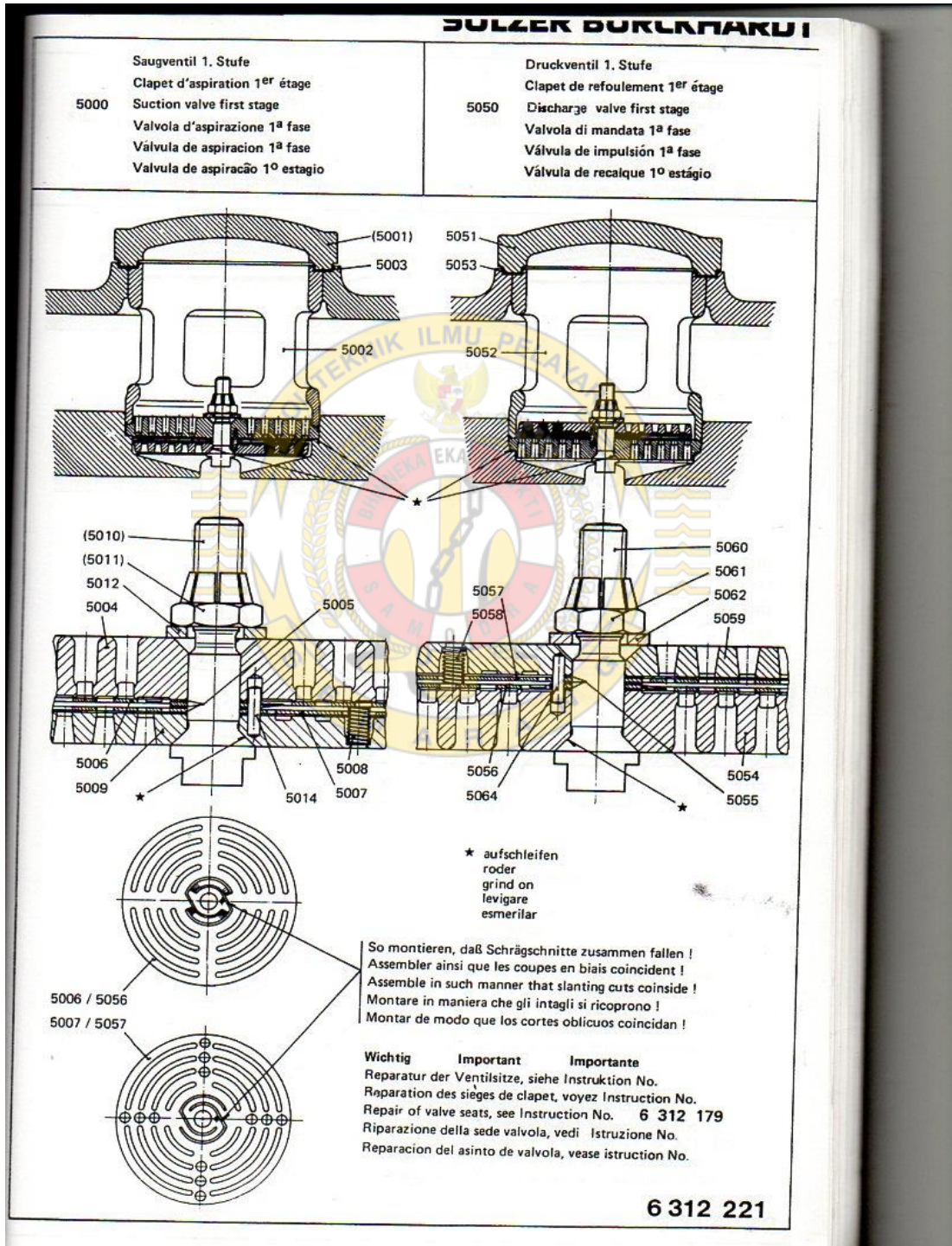
Lampiran 5

Ring piston patah



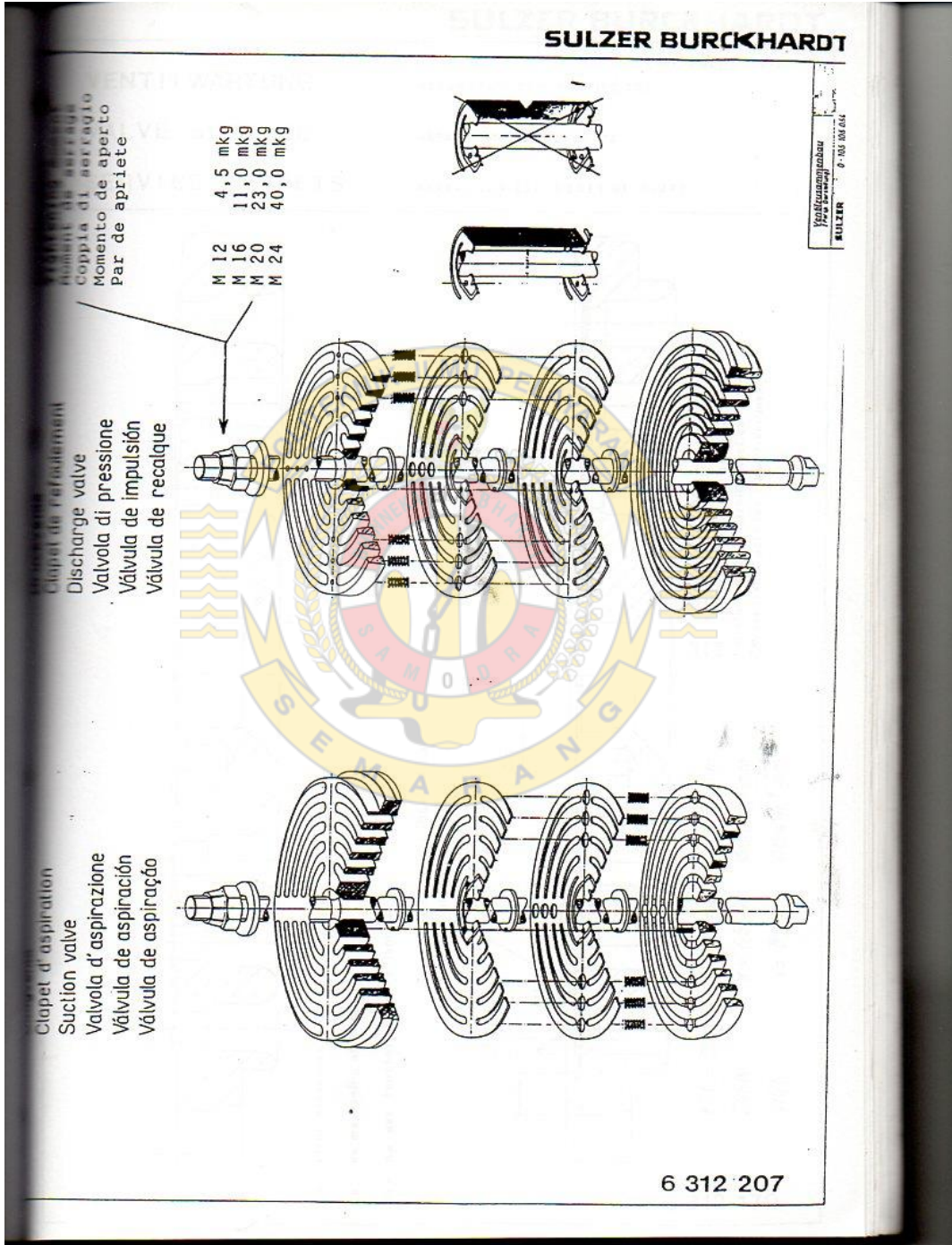
Lampiran 6

Suction and discharge valve



Lampiran 6

Suction and discharge valve



Lampiran 7

Repair valve seats

SULZER BURCKHARDT

SEPTEMBER 1985

VENTILWARTUNG REPARATUR DER VENTILSITZE
VALVE SERVICE REPAIR OF VALVE SEATS
SERVICE CLAPETS REPARATION DES SIÈGES DE CLAPET

The drawing shows two cross-sectional views of valve seats. The left view shows a series of seats with a height dimension 'h' and a chamfered edge of 0.5mm. The right view shows a more detailed cross-section with a chamfered edge of 0.5mm, a diameter dimension ϕd , and a height dimension 'h'. A specific detail shows a chamfered edge with a diameter of 1.5mm and a height of 0.5mm. A table below the drawing lists dimensions for three different valve seat models: 60K-236K, 266K, and 310K.

Feingedrehte Oberfläche
 Fine surface
 Surface fine

h · nicht verändern
 h · no machining allowed
 h · ne pas toucher cette hauteur

ACHTUNG - ATTENTION
 Für gesteuerte Saugventile nicht zulässig.
 Not allowed for controlled suction valves.
 Pas réalisable pour des clapets commandés.

60K - 236K:	x = 5 mm	$\phi d = 3,1$ mm
266K:	x = 6,5 mm	$\phi d = 3,1$ mm
310K:	x = 8 mm	$\phi d = 4,1$ mm

6 312 179

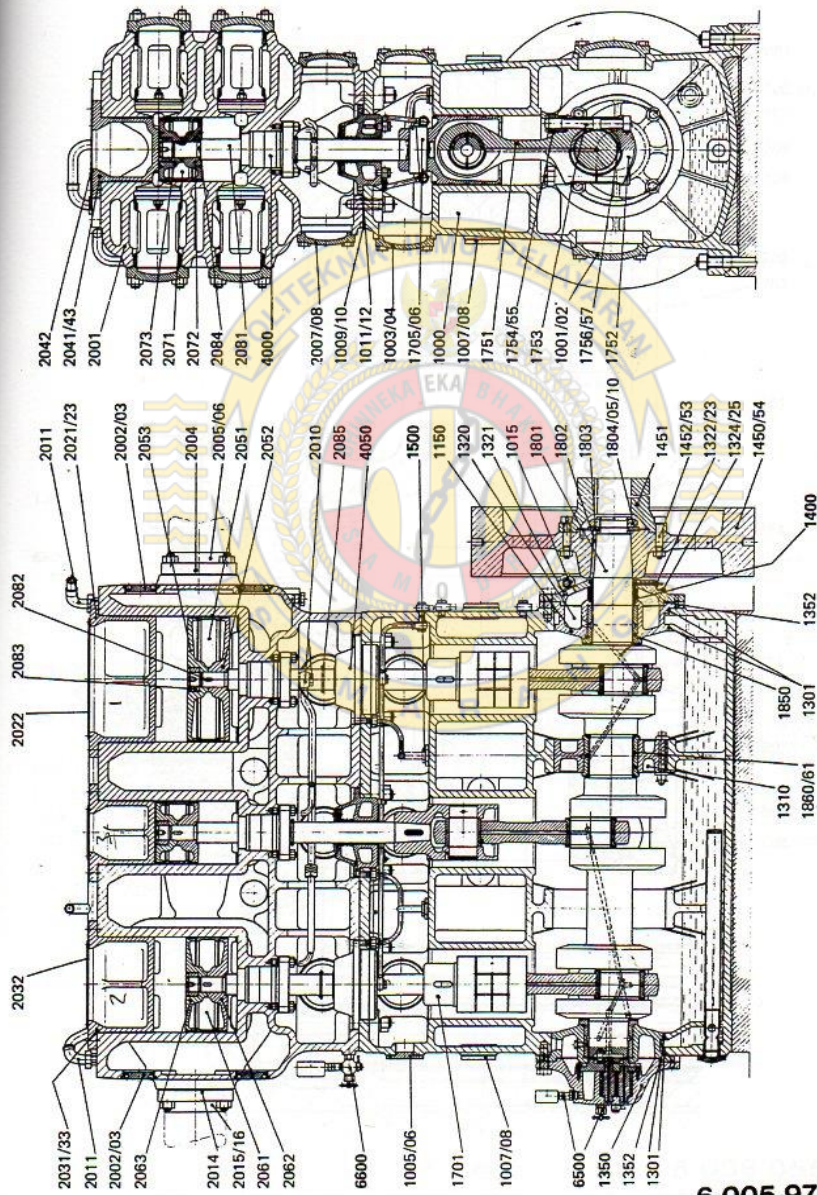
Lampiran 8

Penampang Compressor

SULZER

Schnitte durch den Kompressor
Coupes par le compresseur
Secciones del compresor

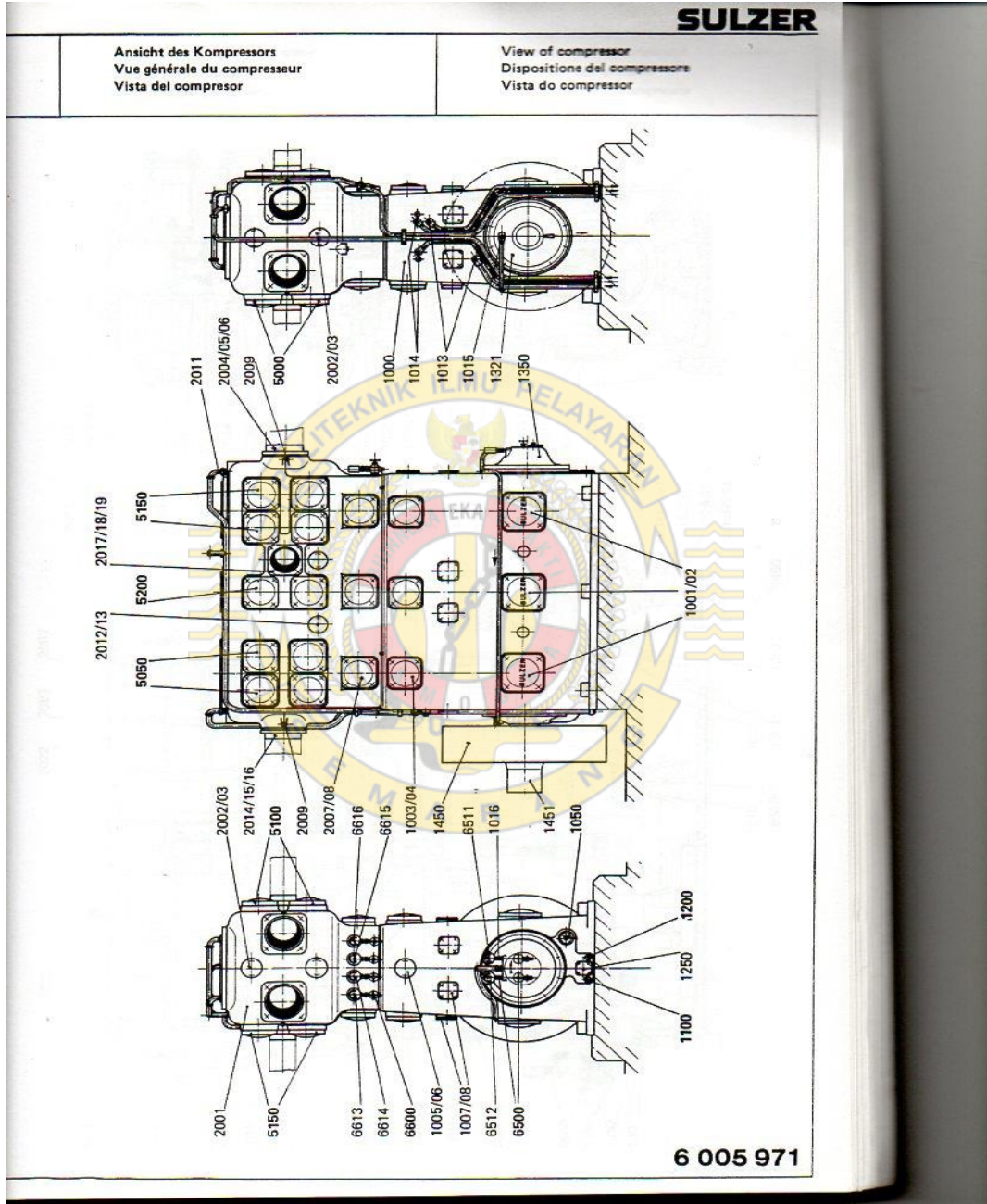
Sectional view of compressor
Sezioni del compressore
Vista em corte do compressor



6 005 973

Lampiran 8

Penampang Compressor



Lampiran 9

Maintenance Schedule

SULZER BURCKHARDT

Maintenance work and inspections	Hours of Operation									
	4 000	000.8	16'000	24'000	32'000	40'000	48'000			
1. Oil change. (pay attention to the oil quality) clean oil filter	X	X	X	X	X	X	X			
2. Inspection of the suction and discharge valves (reliable monitoring assumed)	X	X	X	X	X	X	X			
3. Check clearances of main bearings, connecting rod bearings, crossheads, crosshead pin bearings and guide bearings (without removing the bearings) Check piston clearances Inspect piston rod stuffing box (dismantle cylinder covers and pistons incl. piston rods) Inspect oil scrapers and surface of piston rods (dismantle cylinder covers and pistons incl. piston rods) Check tightness of connecting rod bolts, keys of crossheads and piston nuts Check internal cooling water connections for leaks		X	X	X	X	X	X			
4. Disassemble main bearings and connecting rod bearings for inspection				X			X			
5. Check pre-tension of piston crowns										
6. Inspect or replace crankshaft seal										
7. Check alignment of the driving elements (motor, intermediate shaft, coupling, crankshaft) Check crankshaft deflection (crankshaft dial indicators can be ordered with Sulzer Bros.)										
8. Inspect cooling water spaces										
9. Performance test of the cooling / heating system as well as the safety - and control instruments Check set points of the safety instruments										

Each time a piston skirt is being replaced

When oil leakage excessive

Each time one of the driving elements has been disconnected resp. reassembled but at least every 24'000 hours

Every 1 to 2 years. Cleaning as necessary.

Every year

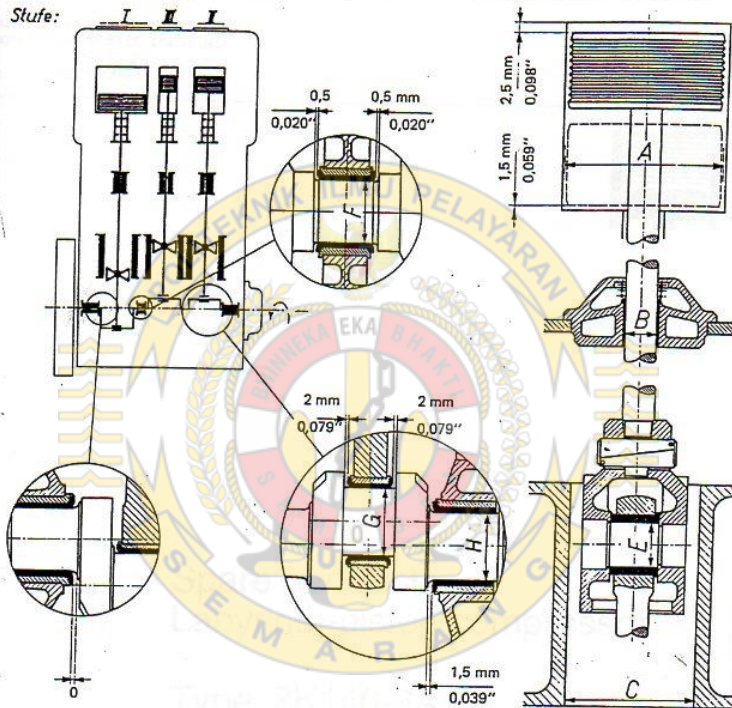
Note : The time intervals quoted are guiding figures, based on continuous operation. When frequent interruptions in operation occur, the times elapsing between inspections and maintenance work are to be shortened. Further details are contained in the instruction manual. Experience gained during operation is to be taken into account.

Lampiran 10

Ukuran Clearance

SULZER

Kolben- und Lagerspiele oelfreier Kompressoren.
 Jeux de pistons et de paliers des compresseurs à piston sec.
 Piston and bearing clearances of oilfree compressors.
 Giochi dei pistoni e dei cuscinetti dei compressori a pistone secco.
 Juegos de los émbolos y cojinetes de los compresores a pistón seco.



Pos.	Stufe Etape Stage Gradino Fase	Bohrung Alésage Bore Alesaggio Agujero		Welle Arbre Shaft Albero Eje		Max. zulässiges Spiel Jeu max. admissible Max. adm. clearance Gioco max. ammissibile Juego máx. admisible	
		mm	inch	mm	inch	mm	inch
A	I	455 +0,063 -0	+0,0025 0	455 -0,450 -0,550	+0,0177 -0,0217	1,3	0,051
	II	345 +0,057 -0	+0,0022 0	345 -0,340 -0,410	+0,0134 -0,0161	1,0	0,039
	III	230 +0,046 -0	+0,0018 0	230 -0,230 -0,280	+0,0081 -0,0110	0,7	0,028
B		75 +0,076 +0,030	+0,0030 +0,0012	75 +0 -0,019	+0 -0,0007	0,14	0,006
C		250 +0,029 -0	+0,0011 0	250 -0,070 -0,099	+0,0028 -0,0038	0,2	0,008
E		100 +0,116 +0,080	+0,0045 +0,0031	100 +0 -0,022	+0 +0,0009	0,2	0,006
F		150 +0,068 +0,041	+0,0027 +0,0017	150 +0 -0,025	+0 -0,0010	0,19	0,007
G		140 +0,068 +0,043	+0,0027 +0,0017	140 +0 -0,025	+0 -0,0010	0,18	0,007
H		140 +0,108 -0,043	+0,0042 -0,0017	140 +0 -0,025	+0 -0,0010	0,18	0,007

Kolben- und Lagerspiele müssen in kaltem Zustand der Maschine gemessen werden.
 Les jeux de pistons et de paliers doivent être mesurés à l'état froid de la machine.
 Piston and all bearing clearances should be measured when the machine is cold.
 I giochi dei pistoni e dei cuscinetti devono essere misurati allo stato freddo della macchina.

3 K 140 - 3 A

6005977

Lampiran 11

Unloading letter



PT PETROKIMIA GRESIK

Produsen pupuk terlengkap di Indonesia



KANTOR PUSAT :

Alamat : Jl. Jenderal Aghmad Yani, Gresik 61119
Kode Pos : 612 Gresik 61101
Telepon : (031) 3981811 - 3981814, 3982100, 3982200
Facsimile : (031) 3981722, 3982272
E-mail : pkg@petrokimia-gresik.com
Home Page : www.petrokimia-gresik.com

KANTOR PERWAKILAN :

Alamat : Jl. Tanah Abang III No. 16 Jakarta 10160
Kode Pos : 1005 Jakarta 10000
Telepon : (021) 3446459, 3446645
Facsimile : (021) 3841994
E-mail : petrogres@con.net.id
perjasa@petrokimia-gresik.com

PUSAT LAYANAN PELANGGAN :

Telepon Bebas Pulsa : 0800.1.636363 & 0800.1.888777
Telepon : (031) 3979976
Facsimile :
E-mail : layananpelanggan@petrokimia-gresik.com

Gresik, 18 September 2015

No : 2291/09/Pel/2015

Subject: Unloading Ammonia Liquid

Kepada
Master / Chief officer
MT. PUPUK INDONESIA
Di Pelsus Petrokimia Gresik

Dengan Hormat,

Untuk kelancaran operasional dan keselamatan operasi, harap dilakukan unloading NH3 kenaikan secara bertahap dan hati-hati dengan ketentuan sebagai berikut :

- Flow min : 250 ton/jam
- Flow max : 275 ton/jam
- Press max shore : 5,0 kg/cm² (antara flow & press mana yang lebih dulu)
- Temperature : - 33 °C

Apabila pressure kapal melewati 5,5 kg/cm², pompa kapal auto stop

Demikian atas perhatian dan kerjasamanya kami sampaikan terima kasih

PT Petrokimia Gresik


I Gusti Bagus Manacika
Manager

MT. PUPUK INDONESIA


MT PUPUK INDONESIA
Call Sign : YBBU2
Port Registry : JAKARTA
Master/Chief officer

Lampiran 12

Tank Measurement

SHIP TANKS MEASUREMENT REPORT

Before Discharge
 Vessel Name : PUPIUK INDONESIA
 Date / Port : 23th March 2016, Petrokimia Gresik PDS
 Voy.no. : AMB-05/2016

No	DISCRIPTION	Fwd Draft.				Trim.			
		1 S	2 S	3 P	4 S	9.3	9.5	9.5	0.2
1	Level Reading Tank	12.237	12.196	12.173	12.170				
2	Liquid Temperature	-31.4	-31.4	-31.2	-31.5				
3	Vapour Temperature	-26.5	-22.8	-21.3	-21.4				
4	Vapour Pressure	0.15	0.15	0.14	0.14				
5	TANK CAPACITY	2105.494	2818.001	2815.894	2610.696				
6	Tape Correction (3)	0	0	0	0				
7	Density Liquid Corr.	0.004	0.004	0.004	0.004				
8	Trim Correction	-0.008	-0.01	-0.01	-0.009				
9	List Correction	0	0	0	0				
10	Level Corrected	12.233	12.19	12.167	12.177				
11	Liquid Volume	1982.371	2652.302	2649.424	2434.768				
12	Shrinkage F Liquid (2)	0.998184	0.998184	0.998112	0.998084				
13	Volume Liquid Corrd	1978.7710	2647.4748	2641.7370	2430.3367				
14	Density L liquid NH3	0.67938	0.67914	0.67938	0.67938				
15	Tonage Liquid	1344.337	1798.959	1794.409	1651.413				
16	volume Vapour	123.123	165.699	169.16	167.47				
17	Shrinkage F Vapour 3	0.99811	0.998258	0.998478	0.998544				
18	Vol.Vapour Corrd.	122.8903	165.4104	167.2261637	175.6314				
19	Vopour Factor	0.815105	0.80305	0.80305	0.798282				
20	Tonage Vapour	0.118	0.157	0.158	0.155				
21	Total Tonage NH3	1344.455	1799.116	1797.198	1651.577				

Quantity before Discharging M/T
 Quantity before Discharging 13182.384 M/T
 Total Cargo On Board 13192.38 M/T
 (In Vacue)



PT. Petrokimia Gresik

