

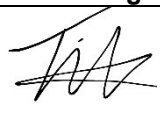




Prosedur Instalasi Shurjoint Flexible Coupling 7707

Tipe Dokumen : Instruksi Kerja
Nomor Dokumen : GDE/PMU/ENG/SOP/001
Nomor Revisi : 00
Departemen : Engineering PMU
Tanggal Berlaku : 17/03/2020
Tingkat Keamanan: *Not Specified*
Retensi : Permanen
Tipe Penyimpanan: Elektronik
Level Dokumen : III

Dokumen ini milik PT Geo Dipa Energi (Persero) dan tidak boleh disalin atau digunakan untuk keperluan lain baik sebagian maupun seluruhnya tanpa persetujuan terlebih dahulu. Versi elektronik yang ada pada DMS merupakan versi yang terbaru. Dokumen yang dicetak berstatus tidak dikendalikan.

LEMBAR PENGESAHAN

	Nama	Jabatan	Tandatangan	Tanggal
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Diperiksa oleh	Nursanty Elisabeth B	Mechanical Engineer		16/03/2020
Disetujui oleh	Agung Wisnu Mukti	Engineering Manager		17/03/2020

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RIWAYAT PERUBAHAN DOKUMEN

No. Revisi	Tanggal	Bagian	Uraian Perubahan	Disetujui Oleh
00	11/05/2020	Semua		Engineering Manager

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1. PENDAHULUAN

Shurjoint Flexible Coupling 7707 merupakan coupling yang digunakan untuk menyambung pipa dengan profil grooved. Prosedur ini diterbitkan guna menjelaskan pemasangan/instalasi dan penyimpanan Shurjoint Coupling 7707 pada wilayah operasi PT Geo Dipa Energi (Persero).

2. BAHAYA PEKERJAAN

Bahaya yang berpotensi terjadi dalam proses pemasangan Coupling Shurjoint adalah:

- Tergelincir
- Terjepit
- Dan terpapar uap panas

Untuk menghindari dari risiko diatas, diperlukan koordinasi dan proses dokumentasi seperti toolbox meeting, ijin kerja, dan JSA. Selain administratif, Alat Pelindung Diri diwajibkan pada pekerjaan ini

3. PROSEDUR PEKERJAAN

Peralatan:

1. Flexible Coupling 7077 Shurjoint
2. Lubricant/Minyak Goreng
3. Kuas yang bersih
4. Torque Wrench (Wajib)
5. Kain Lap Bersih

Prosedur pra-kerja:

1. Lakukan pembongkaran pada coupling dengan melepas kedua bolt yang terpasang.
2. Pisahkan gasket dari casing, lalu simpan *casing* dan *bolt* pada tempat yang aman dan kering.
3. Lakukan pembersihan permukaan pipa dan gasket menggunakan kain bersih untuk menghilangkan kotoran sisa.
4. Lakukan pelumasan dengan lubricant/minyak menggunakan kuas bersih pada:
 - a. Karet Gasket
 - b. Sisi dalam *coupling*
 - c. Permukaan *grooving* pipa yang akan diinstall *coupling*
5. Memasang gasket pada pipa
6. Lakukan penyejajaran pipa yang akan disambung
7. Memasukkan gasket diantara kedua pipa
8. Memasang coupling pada gasket yang terpasang dan pastikan masing-masing sisi coupling mengunci grooving yang terdapat pada pipa
9. Memasukkan Bolt & Nut dan mengencangkan dengan tangan
10. Lakukan torsi dengan Torque Wrench sebesar 250Nm setara dengan 185Lbs/ft

4. PENYIMPANAN/STORAGE

Penyimpanan Flexible Coupling Shurjoint tidak diperbolehkan terkena sinar matahari langsung dan tidak boleh terpapar zat kimia yang asam dan basa.

5. LARANGAN

Dilarang keras melumaskan gasket dengan solar atau bahan bakar serupa yang dapat menyebabkan kerusakan pada gasket.

6. REFERENSI

Shurjoint Catalog, 2020

Shurjoint Installation Instruction, 2017

DAFTAR LAMPIRAN

Lampiran 1. Catalog Shurjoint 7707



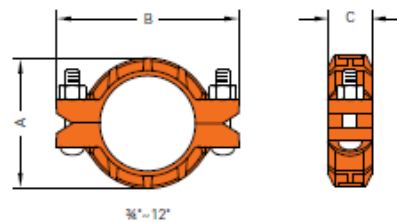
Model

7707 Heavy Duty Flexible Coupling

The Shurjoint Model 7707 heavy duty flexible coupling is designed for use in a variety of general piping applications of moderate or high pressure services. Working pressure is usually dictated by

the wall thickness and rating of the pipe being used. The Model 7707 couplings feature flexibility that can accommodate misalignment, distortion, thermal stress, vibration, noise and seismic tremors. The

Model 7707 can even accommodate an arced or curved piping layout. See Typical Applications - Flexible Couplings on page 191.



Nominal Size	Pipe O. D.	Max. Working Pressure (CWP)**	Max. End Load (CWP)	Axial Displacement †	Angular Movement ††		Dimensions			Bolts		Weight
					Degrees Per Coupling	Per Pipe	A	B	C	No.	Size	
in	in	PSI	Lbs	in	(°)	in / ft	in	in	in		in	Lbs
mm	mm	Bar	kN	mm		mm / m	mm	mm	mm		mm	Kgs
3/4"	1.050	1000	865	0.0625	3° - 23°	0.71	2.13	3.74	1.81	2	3/4 x 2 1/2	1.3
20	26.7	69	3.79	1.6		58	54	95	46		M10x55	0.6
1	1.315	1000	1360	0.0625	2° - 45°	0.58	2.40	4.02	1.81	2	3/4 x 2 1/2	1.7
25	33.4	69	6.15	1.6		48	61	102	46		M10x55	0.8
1 1/4	1.660	1000	2160	0.0625	2° - 10°	0.45	2.76	4.45	1.81	2	3/4 x 3	2.1
32	42.2	69	9.64	1.6		38	70	113	46		M12x75	1.0
1 1/2	1.900	1000	2830	0.0625	1° - 54°	0.40	3.00	4.57	1.81	2	3/4 x 2 1/2	2.1
40	48.3	69	12.64	1.6		33	76	116	46		M12x60	1.0
2	2.375	1000	4430	0.0625	1° - 31°	0.31	3.50	5.35	1.81	2	3/4 x 3	2.6
50	60.3	69	19.69	1.6		26	90	136	46		M12x75	1.2
2 1/2	2.875	1000	6490	0.0625	1° - 15°	0.26	4.00	5.98	1.85	2	3/4 x 3	2.9
65	73.0	69	28.86	1.6		22	102	152	47		M12x75	1.3
76.1 mm	3.000	1000	7065	0.0625	1° - 12°	0.25	4.06	6.02	1.85	2	3/4 x 3	2.9
	76.1	69	31.37	1.6		21	103	153	47		M12x75	1.3
3	3.500	1000	9620	0.0625	1° - 02°	0.21	4.88	6.34	1.85	2	3/4 x 3	3.3
80	88.9	69	42.81	1.6		18	124	161	47		M12x75	1.5
4	4.500	1000	15900	0.1250	1° - 36°	0.33	6.18	8.03	2.05	2	3/4 x 3 1/2	4.6
100	114.3	69	70.76	3.2		27	157	204	52		M16x90	2.1
139.7 mm	5.500	1000	23750	0.1250	1° - 18°	0.27	7.32	9.41	2.09	2	3/4 x 3 1/2	6.8
	139.7	69	105.71	3.2		23	186	239	53		M16x90	3.1
5	5.563	1000	24295	0.1250	1° - 18°	0.27	7.32	9.65	2.09	2	3/4 x 3 1/2	7.2
125	141.3	69	108.14	3.2		22	186	245	53		M16x90	3.3
165.1 mm	6.500	1000	33170	0.1250	1° - 07°	0.23	8.11	10.24	2.09	2	3/4 x 4 1/2	7.9
	165.1	69	147.64	3.2		19	211	260	53		M20x120	3.6
6	6.625	1000	34455	0.1250	1° - 05°	0.22	8.24	10.75	2.09	2	3/4 x 4 1/2	8.1
150	168.3	69	153.42	3.2		19	214	273	53		M20x120	3.7
8	8.625	800	46720	0.1250	0° - 50°	0.18	10.86	13.23	2.44	2	3/4 x 4 1/2	14.5
200	219.1	55	207.26	3.2		15	276	336	62		M20x120	6.6
10	10.750	800	72575	0.1250	0° - 40°	0.14	13.50	16.10	2.56	2	3/4 x 6 1/2	23.3
250	273.0	55	321.78	3.2		11	343	409	65		—	10.6
12	12.750	800	102090	0.1250	0° - 34°	0.12	15.35	18.50	2.60	2	3/4 x 6 1/2	26.4
300	323.9	55	452.95	3.2		10	380	470	66		—	12.0
200 JIS	8.516	800	45545	0.1250	0° - 51°	0.18	10.86	13.03	2.36	2	3/4 x 4 1/2	13.9
	216.3	55	202.00	3.2		15	276	331	60		M20x120	6.3
250 JIS	10.528	800	69610	0.1250	0° - 41°	0.14	13.27	15.87	2.60	2	3/4 x 6 1/2	22.4
	267.4	55	308.71	3.2		12	337	403	66		—	10.2
300 JIS	12.539	800	98740	0.1250	0° - 35°	0.12	15.31	18.11	2.60	2	3/4 x 6 1/2	25.5
	318.5	55	437.98	3.2		10	389	460	66		—	11.6

** Working Pressure is based on roll grooved standard wall carbon steel pipe.

† Allowable Axial Displacement and Angular Movement (deflection) figures are for roll grooved standard steel pipe. Values for cut grooved pipe will be double that of roll grooved. These values are maximums; for design and installation purposes these figures should be reduced by 50% for 3/4" - 3 1/2"; 25% for 4" and larger to compensate for jobsite conditions.

†† Deflection or angular movement is the maximum value that a coupling allows under no internal pressure.

* Non standard stock items may require longer lead time.

Lampiran 2. Prosedur Instalasi



GROOVED COUPLINGS


Gasket Installation - Preliminary Steps -



1. INSPECT PIPE ENDS: For optimum sealing by the gasket, the exterior surface of the pipe ends must be free from any indentations, projections, roll marks or other harmful surface defects such as loose paint, scale, dirt, chips, grease and rust.



2. CHECK GASKET: Verify the gasket supplied is correct for the intended service. Color code identifies gasket grade.

 Refer to page 36 for additional information on gaskets.



3. LUBRICATE GASKET: To help insert pipe smoothly and mount couplings smoothly without pinching, apply a thin layer of **Shurjoint** Lubricant to the sealing lips of the gasket and as well as to the exterior of the gasket. Other compatible lubricants may be used so long as they are not harmful to the gasket. System temperature should also be considered when selecting a lubricant. See page 38 for details.

Note: Lube-E gasket: Normally no lubricant is required when using a Lube-E gasket.



4. INSTALL GASKET: Install the gasket over one end of the pipe so that the pipe end is exposed. No part of the gasket should overhang this end of the pipe.

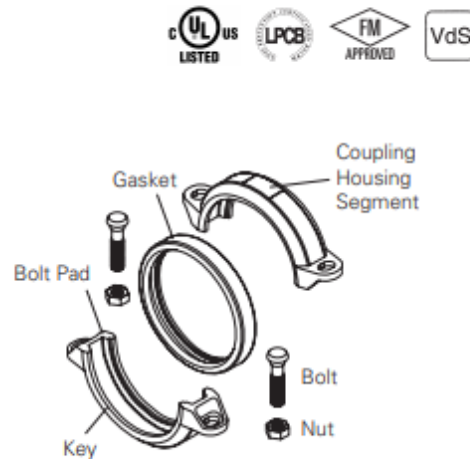


5. BRING THE MATING PIPE TOGETHER: Bring together and align the two pipe ends to be joined. Slide the gasket over the ends and center it between the grooves of the pipe to be joined. No part of the gasket should protrude into the groove of either pipe.

Models 7705, 7705H & 7707 Couplings

Please read these instructions carefully before installation.

1. Refer to page 50 for preliminary steps 1,2,3,4 & 5.



GROOVED COUPLINGS



2. INSTALL COUPLING HALVES: Place the coupling halves over the gasket and make sure that the coupling keys are engaged into the grooves.



3. INSERT BOLT & NUT: Insert the remaining bolt and apply the nuts hand tight. Make sure that the oval neck of the bolt engages into the bolt hole of the housing.



4. TIGHTEN NUTS (For 3/4" to 12" Models 7705, 7707 Couplings and 14" to 26" Model 7707N Couplings): Tighten nuts alternately and equally until the bolt pads meet and make metal-to-metal contact. Tighten nuts by another one quarter to one half turn to make sure the bolts and nuts are snug and secure. The use of a torque wrench is not required.



Lampiran 3. Prosedur Instalasi

Bolt Size		Torque Range	
mm	inch	Lbs-Ft	Nm
M8	$\frac{5}{16}''$ - 18	15-25	20-34
M10	$\frac{3}{8}''$ - 16	30-40	40-55
M12	$\frac{1}{2}''$ - 13	90-105	120-140
M16	$\frac{5}{8}''$ - 11	100-130	135-175
8" M20	$\frac{3}{4}''$ - 10	150-200	200-270
M22	$\frac{7}{8}''$ - 9	180-220	240-300
M24	1'' - 8	200-225	270-305
M29	$1\frac{1}{8}''$ - 7	250-300	340-400
M32	$1\frac{1}{4}''$ - 7	375-500	510-680