

**PENGUMUMAN PELELANGAN TERBUKA  
Nomor : 039.Pm / 612 / SCM / 2019**

Divisi Supply Chain Management PT PJB mengundang Perusahaan / Rekanan untuk mengikuti Pelelangan Terbuka dengan Pascakualifikasi sebagai berikut :

**1. Paket Pekerjaan**

Nama Pekerjaan : Pengadaan Upper Main Hydrant Yard Area Coal Yard dan Switch Yard untuk PT PJB UBJOM Tanjung Awar-Awar

Sumber Dana : Anggaran Investasi/AI PT PLN Tahun 2020.

**2. Syarat Peserta Lelang**

- Perusahaan yang berbadan hukum PT/Konsorsium/Joint Operation (JO)/KSO dengan Kualifikasi sub bidang pengadaan Mekanikal/Elektrikal yang dibuktikan dengan Surat Izin Usaha dan/atau Perjanjian Kerjasama (bagi Konsorsium/JO/KSO).
- Calon Peserta memiliki pengalaman minimal 2 (dua) kali di pekerjaan pemasangan sistem perpipaan water atau gas.
- Penyedia Barang/Jasa memiliki sertifikat OHSAS 18001 atau memiliki SMK3 mengenai Sistem Manajemen Keselamatan dan Kesehatan Kerja yang dikeluarkan oleh badan sertifikasi yang terakreditasi dan masih berlaku hingga saat pelaksanaan pekerjaan berlangsung.
- Penyedia barang/jasa memiliki personil dengan ketentuan sebagai berikut :

No.	Posisi	Jumlah (minimal)	Sertifikat	Penerbit Sertifikat	CV - Pengalaman
1.	Project / Site Manager / Staff	1	-	-	Mempunyai pengalaman minimal terdapat 2 (dua) kali project pengalaman dalam melakukan pekerjaan menggunakan prinsip manajemen proyek.
2.	Welding Inspector	1	Welding Inspector	AWS atau setara B4T	Minimal 2 (dua) kali project.
3.	Welder	2	Welder 5G	Dirjen Migas / Disnakertrans / BNSP	Minimal 2 (dua) kali project.
4.	Pengawas K3 Umum	1	AK3 Umum	Disnakertrans	Mempunyai pengalaman minimal 2 (dua) kali project dalam melakukan pekerjaan hot work dan memahami Standar Internasional.
5.	Ahli NDT	1	Level 1	B4T / Dirjen Migas / Depnaker / BNSP	Minimal 2 (dua) kali project.

- Penyedia Barang/Jasa tidak sedang menjalani sanksi Blacklist di lingkungan PT PLN (Persero) Group.

**3. Pendaftaran dan Pengambilan Dokumen Pengadaan :**

Pendaftaran dan pengambilan dokumen pengadaan (***Dokumen pengadaan dalam bentuk File /soft copy***), pada :

Tanggal : 05 November 2019 s.d. 11 November 2019  
Pukul : 08.00 WIB s.d. 15.00 WIB (setiap hari kerja)  
Tempat : Divisi Supply Chain Management, PT PJB  
          Jl. Ketintang Baru No. 11, Surabaya  
Contact person : Aryo Jatikusumo  
                      Rizky Afrian

4. Pendaftaran dan Pengambilan Dokumen Pengadaan dapat diwakilkan dengan ***membawa surat tugas dari direktur utama/pimpinan perusahaan/kepala cabang dan Copy SIUP, Copy Perjanjian Kerjasama (bagi konsorsium/JO/KSO) serta Flasdisk.***
5. Seseorang dilarang mewakili lebih dari 1 (satu) perusahaan dalam mendaftar dan mengambil Dokumen Pengadaan.
6. Penyedia yang mendaftar untuk ikut pelelangan namun tidak memasukkan Dokumen Penawaran tanpa alasan yang profesional akan dikenakan ***sanksi Blacklist selama 6 (enam) bulan.***

Pengumuman ini bukan merupakan ikatan yang dapat mengakibatkan kewajiban finansial kepada PT Pembangunan Jawa Bali.

Surabaya, 05 November 2019

**PEJABAT PENGADAAN  
SUPPLY CHAIN MANAGEMENT PT PJB**

NB : Pengumuman dapat dilihat di website : <http://www.ptpjb.com>

**SPESIFIKASI BARANG YANG DIMINTAKAN PENAWARAN**

NO	NAMA BARANG / JASA	WAKTU PENYERAHAN BARANG/JASA																
	<p><b>PENGADAAN UPPER MAIN HYDRANT YARD AREA COAL YARD DAN SWITCH YARD UNTUK PT PJB UBJ O&amp;M TANJUNG AWAR-AWAR</b></p> <p><b>A. Detail Suplai Barang :</b> Ketentuan barang yang ditawarkan adalah seluruh komponen fire protection dan tidak terbatas sebagai berikut :</p> <table border="1" data-bbox="316 696 1190 2065"> <thead> <tr> <th data-bbox="316 696 395 730">No.</th> <th data-bbox="395 696 938 730">Nama &amp; Spesifikasi Barang</th> <th data-bbox="938 696 1070 730">Jumlah</th> <th data-bbox="1070 696 1190 730">Satuan</th> </tr> </thead> <tbody> <tr> <td colspan="4" data-bbox="316 730 1190 763"><b>A. 1 Material Area Coal Yard</b></td> </tr> <tr> <td data-bbox="316 763 395 1597">1.</td> <td data-bbox="395 763 938 1597">                     Outside &amp; Yoke (OS &amp; Y) Gate Valve Untuk terpasang di Passing Pipa Mainyard                       Detail Specification :                      a. Dimension : DN200                      b. Seat type : Resilient wedge                      c. Working pressure : 300 psi (21 bar)                      d. Type Connection : F-F (ANSI)                      e. Connections : Flange diameter and thickness according to ANSI B16.1 Class 125, EN1092 2 PN10 or EN1092-2 PN16                      f. Warna : RED                      g. Minimum detail komposisi material :                      g.1. Body : ductile iron                      g.2. Wedge : Ductile Iron                      g.3. Handwheel : ductile iron                      g.4. Stem : Stainless Steel AISI 420                      g.5. Bonet Gasket : EPDM                      g.6. Bonnet : Ductile Iron                      g.7. Yoke : Ductile Iron                      g.8. Stem Bushing : Brass                      g.9. Glan : ductile iron                      g.10. Gland Nut : Carbon steel                      g.11. Washer : Brass                      g.12. Flat Washer : ductile iron                       Certification &amp; Testing Body :                      FM/UL/ULC/LPCB/VDC/ABS/MEA/CE or acknowledge Body pada OECD country.                 </td> <td data-bbox="938 763 1070 1597">3</td> <td data-bbox="1070 763 1190 1597">EA</td> </tr> <tr> <td data-bbox="316 1597 395 2065">2.</td> <td data-bbox="395 1597 938 2065">                     Outside &amp; Yoke (OS&amp;Y) Gate Valve Untuk terpasang di Passing Pipa Mainyard                       Detail Specification :                      a. Dimension : DN100                      b. Seat type : Resilient wedge                      c. Working pressure : 300 psi (21 bar)                      d. Type Connection : F-F (ANSI).                      e. Connections : Flange diameter and thickness according to ANSI B16.1 Class 125, EN1092 2 PN10 or EN1092-2 PN16                      f. Warna : RED                      g. Minimum detail komposisi material :                      g.1. Body : ductile iron                      g.2. Wedge: Ductile Iron                 </td> <td data-bbox="938 1597 1070 2065">10</td> <td data-bbox="1070 1597 1190 2065">EA</td> </tr> </tbody> </table>	No.	Nama & Spesifikasi Barang	Jumlah	Satuan	<b>A. 1 Material Area Coal Yard</b>				1.	Outside & Yoke (OS & Y) Gate Valve Untuk terpasang di Passing Pipa Mainyard  Detail Specification : a. Dimension : DN200 b. Seat type : Resilient wedge c. Working pressure : 300 psi (21 bar) d. Type Connection : F-F (ANSI) e. Connections : Flange diameter and thickness according to ANSI B16.1 Class 125, EN1092 2 PN10 or EN1092-2 PN16 f. Warna : RED g. Minimum detail komposisi material : g.1. Body : ductile iron g.2. Wedge : Ductile Iron g.3. Handwheel : ductile iron g.4. Stem : Stainless Steel AISI 420 g.5. Bonet Gasket : EPDM g.6. Bonnet : Ductile Iron g.7. Yoke : Ductile Iron g.8. Stem Bushing : Brass g.9. Glan : ductile iron g.10. Gland Nut : Carbon steel g.11. Washer : Brass g.12. Flat Washer : ductile iron  Certification & Testing Body : FM/UL/ULC/LPCB/VDC/ABS/MEA/CE or acknowledge Body pada OECD country.	3	EA	2.	Outside & Yoke (OS&Y) Gate Valve Untuk terpasang di Passing Pipa Mainyard  Detail Specification : a. Dimension : DN100 b. Seat type : Resilient wedge c. Working pressure : 300 psi (21 bar) d. Type Connection : F-F (ANSI). e. Connections : Flange diameter and thickness according to ANSI B16.1 Class 125, EN1092 2 PN10 or EN1092-2 PN16 f. Warna : RED g. Minimum detail komposisi material : g.1. Body : ductile iron g.2. Wedge: Ductile Iron	10	EA	<p>Batas waktu penyelesaian pekerjaan include delivery time yang diminta dalam RKS ini adalah <b>100 (seratus) hari</b> sejak Surat Penunjukan Penyedia Barang / Jasa (SPPBJ)</p>
No.	Nama & Spesifikasi Barang	Jumlah	Satuan															
<b>A. 1 Material Area Coal Yard</b>																		
1.	Outside & Yoke (OS & Y) Gate Valve Untuk terpasang di Passing Pipa Mainyard  Detail Specification : a. Dimension : DN200 b. Seat type : Resilient wedge c. Working pressure : 300 psi (21 bar) d. Type Connection : F-F (ANSI) e. Connections : Flange diameter and thickness according to ANSI B16.1 Class 125, EN1092 2 PN10 or EN1092-2 PN16 f. Warna : RED g. Minimum detail komposisi material : g.1. Body : ductile iron g.2. Wedge : Ductile Iron g.3. Handwheel : ductile iron g.4. Stem : Stainless Steel AISI 420 g.5. Bonet Gasket : EPDM g.6. Bonnet : Ductile Iron g.7. Yoke : Ductile Iron g.8. Stem Bushing : Brass g.9. Glan : ductile iron g.10. Gland Nut : Carbon steel g.11. Washer : Brass g.12. Flat Washer : ductile iron  Certification & Testing Body : FM/UL/ULC/LPCB/VDC/ABS/MEA/CE or acknowledge Body pada OECD country.	3	EA															
2.	Outside & Yoke (OS&Y) Gate Valve Untuk terpasang di Passing Pipa Mainyard  Detail Specification : a. Dimension : DN100 b. Seat type : Resilient wedge c. Working pressure : 300 psi (21 bar) d. Type Connection : F-F (ANSI). e. Connections : Flange diameter and thickness according to ANSI B16.1 Class 125, EN1092 2 PN10 or EN1092-2 PN16 f. Warna : RED g. Minimum detail komposisi material : g.1. Body : ductile iron g.2. Wedge: Ductile Iron	10	EA															

NO	NAMA BARANG / JASA			WAKTU PENYERAHAN BARANG/JASA
	g.3. Handwheel : ductile iron g.4. Stem : Stainless Steel AISI 420 g.5. Bonet Gasket : EPDM g.6. Bonnet: Ductile Iron g.7. Yoke : Ductile Iron g.8. Stem Bushing: Brass g.9. Glan : ductile iron g.10. Gland Nut: Carbon steel g.11. Washer : Brass g.12. Flat Washer: ductile iron  Certification & Testing Body : FM/UL/UCL/LPCB/VDC/ABS/MEA/CE or acknowledge Body pada OECD country.			
3.	Outside & Yoke (OS&Y) Gate Valve  Detail Specification : a. Dimension : DN12.5 b. Seat type: Resilient wedge c. Working pressure : 300 psi (21 bar) d. Type Connection: F-F (ANSI). e. Connections : Flange diameter and thickness according to ANSI B16.1 Class 125, EN1092 2 PN10 or EN1092-2 PN16 f. Warna : RED g. Minimum detail komposisi material : g.1. Body : ductile iron g.2. Wedge : Ductile Iron g.3. Handwheel : ductile iron g.4. Stem : Stainless Steel AISI 420 g.5. Bonet Gasket : EPDM. g.6. Bonnet : Ductile Iron. g.7. Yoke : Ductile Iron. g.8. Stem Bushing: Brass. g.9. Glan : ductile iron. g.10. Gland Nut : Carbon steel g.11. Washer : Brass g.12. Flat Washer: ductile iron Certification & Testing Body : FM/UL/UCL/LPCB/VDC/ABS/MEA/CE or acknowledge Body pada OECD country.	2	EA	
4.	Pilar Hidrant & Outside Hidrant Box (Include: 1 Rool Fire Hose 2.5", 1 Nozzle 2.5")  Minimum pilar hydrant Spesification : a. Operating Nut : Bronze b. Hold down Nut : bronze c. Bonnet : Cast Iron d. Upper Rod : Carbin steel e. Hose Nozzle : bronze f. Hose nozzle gasket : NBR g. Hose nozzle cap : Cast Iron h. Stem Pin : stainless steel i. Sesat ring : Bronze  Minimum Hose Spesification : a. length : 30 M b. WORKING PRESSURE : 17/250 c. type EPDM/canvas/rubber d. bronze female connector set  Minimum Nozzle spesification: a. inlet swivle : 2.5" b. include : pitol grip. c. type turbojet	8	EA	

NO	NAMA BARANG / JASA			WAKTU PENYERAHAN BARANG/JASA
5.	Pipa Detail material : a. Black Steel ERW DN200 b. Standard: ASTM A-53, c. Grade: A or B d. Sch No.: 40	229	EA	
6.	Pipa Detail material : a. Black Steel ERW DN100 b. Standard : ASTM A-53, c. Grade : A or B d. Sch No. : 40	7	EA	
7.	Pipa Detail material: a. Black Steel ERW Uk. 1/2" b. Standard : ASTM A-53, c. Grade : A or B d. Sch No. : 40	1	EA	
8.	Elbow 90° ASTM A 234, Sch 40 Dia. 8" type Butt Weld SCH 40	27	EA	
9.	Elbow 90° ASTM A 234, Sch 40 Dia. 4" type Butt Weld SCH 40	8	EA	
10.	Tee Reducer 8" x 4", ASTM A234, BW, Sch 40 type Butt Weld SCH 40	10	EA	
11.	Reducer Concentric 12" x 8", ASTM A234, BW, Sch 40 type Butt Weld SCH 40	2	EA	
12.	Flange Slip On FF ANSI#150 12"	2	EA	
13.	Flange Slip On FF ANSI#150 8"	4	EA	
14.	Flange Slip On FF ANSI#150 4"	28	EA	
15.	Flange A105 ANSI #150 RF-SERRATED-F SW (ASME B16.5) 1/2"	8	EA	
16.	SPIRAL-WOUND W:SS304 /F:FLEXIBLE GRAPHITE OR:CS ANSI #150 RF 4.5MM (ASME B16.20), 12"	2	EA	
17.	SPIRAL-WOUND W:SS304 /F:FLEXIBLE GRAPHITE OR:CS ANSI #150 RF 4.5MM (ASME B16.20), 8"	4	EA	
18.	SPIRAL-WOUND W:SS304 /F:FLEXIBLE GRAPHITE OR:CS ANSI #150 RF 4.5MM (ASME B16.20), 4"	20	EA	
19.	SPIRAL-WOUND W:SS304 /F:FLEXIBLE GRAPHITE OR:CS ANSI #150 RF 4.5MM (ASME B16.20), 1/2"	8	EA	
20.	BOLT SET, A193-B7 A194-2H STUD W/ 2HVY- HEX-NUTS UNIF (ANSI-B1.1) M14 LENGTH 55 MM	32	Set	
21.	BOLT SET, A193-B7 A194-2H STUD W/ 2HVY- HEX-NUTS UNIF (ANSI-B1.1) M16 LENGTH 90 MM	224	Set	
22.	BOLT SET, A193-B7 A194-2H STUD W/ 2HVY- HEX-NUTS UNIF (ANSI-B1.1) M20 LENGTH 110 MM	32	Set	
23.	BOLT SET, A193-B7 A194-2H STUD W/ 2HVY- HEX-NUTS UNIF (ANSI-B1.1) M24 LENGTH 120 MM	24	Set	
24.	Pressure Gauge 0-200 Psi 1/2"	2	EA	
25.	Olet A105 CL.3000 SOCKOLET 8"-1/4"	2	EA	
26.	Coupling A105 CL.3000 THR-THR NPT (ASME B16.11)	2	EA	

NO	NAMA BARANG / JASA			WAKTU PENYERAHAN BARANG/JASA
27.	Thrust Block 500x200x150	357	EA	
28.	Thrust Block Hydrant Pillar	8	EA	
29.	U bolt M16, 8" & nut mat: Galvanis	345	EA	
30.	U bolt M16, 4" & nut mat: Galvanis	12	EA	
31.	UNP 150x75x 6,5 mm	357	EA	
32.	Concrete U-Ditch K300 / Drainase Croosing Jalan 800x800x32000x150	12	EA	
33.	Plate Grating Max Beban 100 Ton	32	m	
<b>A.2 Material Tapping Area Switch Yard dan Fire Station</b>				
1.	<p>Outside &amp; Yoke (OS &amp; Y) Gate Valve Untuk terpasang di Passing Pipa Mainyard</p> <p>Detail Specification :</p> <p>a. Dimension : DN200 b. Seat type : Resilient wedge c. Working pressure: 300 psi (21 bar) d. Type Connection : F-F (ANSI) e. Connections : Flange diameter and thickness according to ANSI B16.1 Class 125, EN1092 2 PN10 or EN1092-2 PN16 f. Warna : RED g. Minimum detail komposisi material: g.1. Body : ductile iron g.2. Wedge : Ductile Iron g.3. Handwheel : ductile iron g.4. Stem : Stainless Steel AISI 420 g.5. Bonet Gasket : EPDM g.6. Bonnet : Ductile Iron g.7. Yoke : Ductile Iron g.8. Stem Bushing : Brass g.9. Glan : ductile iron g.10. Gland Nut : Carbon steel g.11. Washer : Brass g.12. Flat Washer : ductile iron</p> <p>Certification &amp; Testing Body : FM/UL/ULC/LPCB/VDC/ABS/MEA/CE or acknowledge Body pada OECD country.</p>	3	EA	
2.	<p>Outside &amp; Yoke (OS &amp; Y) Gate Valve Untuk terpasang di Passing Pipa Mainyard</p> <p>Detail Specification :</p> <p>a. Dimension : DN200 b. Seat type : Resilient wedge c. Working pressure : 300 psi (21 bar) d. Type Connection : F-F (ANSI) e. Connections : Flange diameter and thickness according to ANSI B16.1 Class 125, EN1092 2 PN10 or EN1092-2 PN16 f. Warna : RED g. Minimum detail komposisi material : g.1. Body : ductile iron g.2. Wedge : Ductile Iron g.3. Handwheel : ductile iron g.4. Stem : Stainless Steel AISI 420 g.5. Bonet Gasket : EPDM g.6. Bonnet : Ductile Iron</p>	1	EA	

NO	NAMA BARANG / JASA			WAKTU PENYERAHAN BARANG/JASA
	g.7. Yoke : Ductile Iron g.8. Stem Bushing : Brass g.9. Glan : ductile iron g.10. Gland Nut : Carbon steel g.11. Washer : Brass g.12. Flat Washer : ductile iron  Certification & Testing Body : FM/UL/ULC/LPCB/VDC/ABS/MEA/CE or acknowledge Body pada OECD country.			
	3. Outside & Yoke (OS & Y) Gate Valve  Detail Specification : a. Dimension : DN100 b. Seat type : Resilient wedge c. Working pressure : 300 psi (21 bar) d. Type Connection : F-F (ANSI) e. Connections : Flange diameter and thickness according to ANSI B16.1 Class 125, EN1092 2 PN10 or EN1092-2 PN16 f. Warna : RED g. Minimum detail komposisi material : g.1. Body : ductile iron g.2. Wedge : Ductile Iron g.3. Handwheel : ductile iron g.4. Stem : Stainless Steel AISI 420 g.5. Bonet Gasket : EPDM g.6. Bonnet : Ductile Iron g.7. Yoke : Ductile Iron g.8. Stem Bushing : Brass g.9. Glan : ductile iron g.10. Gland Nut : Carbon steel g.11. Washer : Brass g.12. Flat Washer : ductile iron  Certification & Testing Body : FM/UL/ULC/LPCB/VDC/ABS/MEA/CE or acknowledge Body pada OECD country.	2	EA	
	4. Outside & Yoke (OS & Y) Gate Valve Untuk terpasang di Passing Pipa Mainyard  Detail Specification : a. Dimension : DN12.5 b. Seat type : Resilient wedge c. Working pressure: 300 psi (21 bar) d. Type Connection : F-F (ANSI) e. Connections : Flange diameter and thickness according to ANSI B16.1 Class 125, EN1092 2 PN10 or EN1092-2 PN16 f. Warna : RED g. Minimum detail komposisi material : g.1. Body : ductile iron g.2. Wedge : Ductile Iron g.3. Handwheel : ductile iron g.4. Stem : Stainless Steel AISI 420 g.5. Bonet Gasket : EPDM g.6. Bonnet : Ductile Iron g.7. Yoke : Ductile Iron g.8. Stem Bushing : Brass g.9. Glan : ductile iron g.10. Gland Nut : Carbon steel g.11. Washer : Brass g.12. Flat Washer : ductile iron  Certification & Testing Body : FM/UL/ULC/LPCB/VDC/ABS/MEA/CE or	1	EA	

NO	NAMA BARANG / JASA	WAKTU PENYERAHAN BARANG/JASA
	acknowledge Body pada OECD country.	
5.	Pilar Hidrant & Outside Hidrant Box (Include: 1 Rool Fire Hose 2.5", 1 Nozzle 2.5")  Minimum pilar hydrant Spesification : a. Operating Nut : Bronze b. Hold down Nut : bronze c. Bonnet : Cast Iron d. Upper Rod : Carbin steel e. Hose Nozzle : bronze f. Hose nozzle gasket : NBR g. Hose nozzle cap : Cast Iron h. Stem Pin : stainless steel i. Sesat ring : Bronze  Minimum Hose Spesification: a. length : 30 M b. WORKING PRESSURE : 17/250 c. type EPDM/canvas/rubber d. bronze female connector set  Minimum Nozzle spesification: a. inlet swivle : 2.5" b. include : pitol grip. c. type turbojet	4 EA
6.	Pipa Detail material: a. Black Steel ERW DN200 b. Standard: ASTM A-53, c. Grade : A or B d. Sch No. : 40	39 EA
7.	Pipa Detail material: a. Black Steel ERW DN150 b. Standard : ASTM A-53, c. Grade : A or B d. Sch No. : 40	4 EA
8.	Pipa Detail material: a. Black Steel ERW DN100 b. Standard: ASTM A-53, c. Grade: A or Bd. Sch No.: 40	7 EA
9.	Elbow 90° ASTM A 234, Sch 40 Dia. 8" type Butt Weld SCH 40	16 EA
10.	Elbow 90° ASTM A 234, Sch 40 Dia. 6" type Butt Weld SCH 40	3 EA
11.	Elbow 90° ASTM A 234, Sch 40 Dia. 4" type Butt Weld SCH 40	5 EA
12.	Tee Equal 4", ASTM A234, BW, Sch 40 type Butt Weld SCH 40	2 EA
13.	Tee Reducer 8" x 6", ASTM A234, BW, Sch 40 type Butt Weld SCH 40	1 EA
14.	Tee Reducer 8" x 4", ASTM A234, BW, Sch 40 type Butt Weld SCH 40	3 EA
15.	Reducer Concentric 12" x 8", ASTM A234, BW, Sch 40 type Butt Weld SCH 40	2 EA
16.	Flange Slip On FF ANSI#150 12"	2 EA



NO	NAMA BARANG / JASA			WAKTU PENYERAHAN BARANG/JASA	
17.	Flange Slip On FF ANSI#150 8"	8	EA	<b>1 LOT</b>	
18.	Flange Slip On FF ANSI#150 6"	2	EA		
19.	Flange Slip On FF ANSI#150 4"	4	EA		
20.	Blind Flange Slip On FF ANSI#150 8"	2	EA		
21.	SPIRAL-WOUND W:SS304 /F:FLEXIBLE GRAPHITE OR:CS ANSI #150 RF 4.5MM (ASME B16.20), 8"	8	EA		
22.	SPIRAL-WOUND W:SS304 /F:FLEXIBLE GRAPHITE OR:CS ANSI #150 RF 4.5MM (ASME B16.20), 6"	2	EA		
23.	SPIRAL-WOUND W:SS304 /F:FLEXIBLE GRAPHITE OR:CS ANSI #150 RF 4.5MM (ASME B16.20), 4"	5	EA		
24.	BOLT SET, A193-B7 A194-2H STUD W/ 2HVY-HEX-NUTS UNIF (ANSI-B1.1) M16 LENGTH 90 MM	32	Set		
25.	BOLT SET, A193-B7 A194-2H STUD W/ 2HVY-HEX-NUTS UNIF (ANSI-B1.1) M20 LENGTH 100 MM	16	Set		
26.	BOLT SET, A193-B7 A194-2H STUD W/ 2HVY-HEX-NUTS UNIF (ANSI-B1.1) M20 LENGTH 110 MM	80	Set		
27.	BOLT SET, A193-B7 A194-2H STUD W/ 2HVY-HEX-NUTS UNIF (ANSI-B1.1) M24 LENGTH 120 MM	24	Set		
28.	Pressure Gauge 0-200 Psi 1/2"	1	EA		
29.	Ubolt Galvanize Dia. 8" & nut Mat. Galvanis	59	Set		
30.	Ubolt Galvanize Dia. 8" & nut Mat. Galvanis	6	Set		
31.	Ubolt Galvanize Dia. 8" & nut Mat. Galvanis	11	Set		
32.	Thrust Block 500x200x150	76	EA		
33.	Thrust Block Hydrant Pillar	1	EA		
34.	UNP 150x75x 6,5 mm	76	Pcs		
35.	Concrete U-Ditch K300 / Drainase Croosing Jalan 800x800x32000x150	11	m <sup>3</sup>		
36.	Plate Grating Max Beban 100 Ton	29	m		
<p><b>B. Suplai Jasa</b></p> <p>Suplai jasa meliputi antara lain namun tidak terbatas sebagaimana berikut :</p> <p>a) Jasa Instalasi</p> <p>b) Testing &amp; Commissioning</p> <p>Detail spesifikasi teknik dan lingkup pekerjaan sesuai dengan TOR.</p> <p>Produk yang ditawarkan berasal dari negara OECD / Indonesia.</p>					