

Dated: 23.08.2018

TECHNICAL CORRIGENDUM#1

TO

BIDDING DOCUMENT

BIDDING DOCUMENT NO. : MEC/23TS/01/51/S2/DRS/SU/0003

SUBJECT OF BIDDING DOCUMENT : SUPPLY OF District Regulatory Skid (DRS) (ANNUAL RATE CONTRACT FOR A PERIOD OF 2 YEARS)

The terms and conditions of the Bidding Document stands modified to the extent indicated below and all other terms and conditions of the Bidding Document remains unaltered:

Sn. No.	PART/Section/ Clause No.	Section	Page No.	Clause No.	Clause Description	Additions / Deletions / Modifications
1.	PART-III	Technical Specification	-	Annexure-IV	List of vendors for Bought-Out items	Modified List of vendors for bought-out items is attached as Annexure-IV
2.	PART-III	Technical Specification	-	Annexure-I	Technical Datasheets	Addition of Technical Datasheet for PCV & SSV at Annexure-I

Note: This Corrigendum shall form an integral part of the bidding document and shall be signed/stamped and submitted along with the bid.

(STAMP & SIGNATURE OF BIDDER)

LIST OF VENDORS FOR BOUGHT-OUT ITEMS

I) PRESSURE REGULATOR AND SLAM SHUT VALVE

1. M/s Pietro Fiorentini S.P.A. (Italy)
2. M/s Emerson Process Management (Fisher / Tartarini)
3. M/s RMG-Regel Messtechnik/Bryan Donkin(Germany)
4. M/s Nirmal Industrial Controls (India) – for maximum 300# and size ϕ 8"
5. M/s Gorter Controls (Netherlands)
6. M/s Dresser
7. M/s Mokveld Valves BV (Netherlands)
8. M/s Schlumberger (USA)
9. M/s Instromet International NV
10. M/s Emerson Process Mgmt asia Pacific Pte Ltd
11. M/s ESME Valves Ltd
12. M/s Kaye & Macdonald Inc.
13. M/s Nuovo Pignone SPA (Italy) (GE Oil Co.)
14. M/s Richards Industries (Formerly Treloar)
15. M/s Samson AG Mess-und Regeltechnik
16. M/s Tormene Gas Technology
17. M/s Vanaz

IIA) RPD METER

1. M/s Elster.
2. M/s. Itron
3. M/s. ElsterInstromet.
4. M/s UGI Meter.
5. M/s Smithmeter.
6. M/s Dresser (GE)
7. M/s American Meter.
8. M/s Romet, Canada
9. M/s Actaris
10. M/s RMG (Germany)
11. M/s FMG
12. M/s Raychem RPG (Upto G-160)

IIB) TURBINE METER

1. M/s Instromet (Belgium)
2. M/s RMG (Germany)
3. M/s Daniel Industries (USA)
4. M/s Rockwin Flow Meters
5. M/s Sensus Metering System Inc
6. M/s Vemmtec Messtechnik GmbH, (Germany)
7. M/s ITRON GmbH (Germany)
8. M/s Elster (Germany)
9. Fluid Components (USA)
10. Barton Instrument (UK)
11. BOPP & Reuther (Germany)

12. Hoffer flow (USA)

III) CONTROL AND SIGNAL CABLES

1. M/s ASSOCIATED CABLES
2. M/s ASSOCIATED FLEXIBLES
3. M/s DELTON Cables Ltd, India
4. M/s BROOK
5. M/s KEI Industries Ltd INDIA
6. M/s Suyog Electricals Ltd, India
7. M/s Thermo Cables Ltd
8. M/s Udey Pyrocables Pvt Ltd, India
9. M/s UNIVERSAL Cables Ltd, India
10. CMI Limited
11. Cords Cable Industries Ltd, India
12. Elkay Telelinks (P) Ltd., India
13. M/s Goyolene Fibres (I) Pvt Ltd, India
14. M/s NICCO Corporation Ltd, India
15. M/s Paramount Communications Ltd, India
16. M/s Polycab Wires Pvt Ltd, India
17. M/s T.C. Communication
18. M/s Netco Cables
19. M/s Reliance Engineers

IV) CARTRIDGE FILTER

- 1) M/s Grand Prix Fab (Pvt.) Ltd. (New Delhi)
- 2) M/s Multitex Filtration Engineers Ltd. (New Delhi)
- 3) M/s Perry Equipment Corp. (USA)
- 4) M/s Siirtec NIGI SPA (Italy)
- 5) M/s AxiaHowmar Ltd. (UK)

- 6) M/s Faudi Filters Systems GmbH (Germany)
- 7) M/s Filtan Filter Anlagenbau GmbH (Germany)
- 8) M/s Plenty Filters (UK)
- 9) M/s ForainS.r.l. (Italy)
- 10) M/s Ravi Techno Systems (Mumbai)
- 11) M/s GujaratOtofilt (Ahmedabad)
- 12) M/s Nirmal Industrial Controls (India)
- 13) M/s Flash Point
- 14) M/s Fil Sep Equipments Pvt. Ltd.
- 15) M/s Chemtrols Industries Ltd.
- 16) M/s Emerson Filters

V) BALL VALVES

1. M/s Hawa Valves (India) Pvt. Ltd, Navi Mumbai
2. M/s Larsen & Toubro (Audco), India
3. M/s Oswal Industries Ltd., India
4. M/s Virgo Engineers Ltd., Delhi
5. M/s Boteli Valve Group Co. Ltd., China
6. M/s Cameron Italy s.r.l., Italy
7. M/s Dafram S.P.A., Italy
8. M/s Fangyuan Valve Group Co. Ltd., China
9. M/s Franz Schuck GmbH, Germany
10. Kita Mura Valve Manufacturing Co.Ltd., India
11. Petrol Valve S.R. Italy
12. Pibi viesse S.P.A. Italy
13. Tormene Gas Technology S.P.A. Valvetalia Group, Italy
14. Valbeot S.R.L. Italy
15. KMC Corporation, South Korea
16. MSA a.s. Czeek Republic
17. OMS Aleri, Italy
18. PCC Valves s.r.l. Italy
19. Perar s.p.a. (Engineering. To TRP srl), Italy
20. Italy s.r.l., Italy
21. MIR Valves, Malaysia
22. M/s Hopkinsons Limited (UK)
23. M/s Nuovo Pignone (Italy)
24. M/s Microfinish Valves Ltd. (Hubli)
25. M/s Pietro Fiorentini (Italy)
26. M/s Raimondi Valve S.P.A. (Italy)
27. M/s Flow Chem
28. VIZA valves (China)
29. M/s Fraz Schuck GMBH, Germany (Formerly Borsig)
30. M/s ITAG, Germany
31. M/s Kitamura Valve manufacturing Co. Ltd
32. M/s MSA A.S.
33. M/s PCC Ball Valves SRL
34. M/s Petrol Valves SRL
35. M/s Tormene Gas Technology SPA (VALVITALIA)

36. Weir Valves & Controls UK Ltd.
37. Flow Control Technologies (France)
38. M/s Friedrich Krombach GMBH & CO. Kg
39. M/s Grove Valve And Regulators Co (USA)
40. M/s JCFabrica DE Valvulas S.A. (Sharjah)
41. M/s Guichon Valves (France)
42. M/s Hindle Cockburns Limited
43. M/s Cameron Italy SRL
44. M/s Petro valves

VI) PLUG VALVES

- 1) M/s Breda Energia Sesto Industria Spa, Italy
- 2) M/s Fisher Sanmar Ltd., Chennai
- 3) M/s Larsen & Toubro Ltd., (Audco) New Delhi
- 4) M/s Nordstrom Valves, USA
- 5) M/s Serck Audco Valves, UK
- 6) M/s Sumitomo Corporation India Pvt. Ltd., New Delhi
- 7) M/s Z Corporation, Korea
- 8) M/s Hawa Valves (India) Pvt. Ltd., Mumbai
- 9) M/s Steel Strong Valves India Pvt. Ltd., Navi Mumbai
- 10) M/s Econo Valves Pvt. Ltd., India (WSSL Ltd. Group Co.)
- 11) M/s Flow-Serve PTE (Mfr. SERCK), India
- 12) M/s Galli Cassina SPA, Italy

VII) GLOBE VALVE

- 1) M/s Weir BDK Valves (Aunit of Weir India Pvt. Ltd.)
- 2) M/s Datre Corpn (Calcutta)
- 3) M/s KSB Pumps Ltd., Coimbatore, India
- 4) M/s L&T Audco
- 5) M/s Neco Schuber & Salzer Ltd. (New Delhi)
- 6) M/s Niton Valve India Pvt. Ltd., India
- 7) M/s Ornate Valves (Mumbai)
- 8) M/s Panchavati Valves & Flages (P) Ltd., India
- 9) AV Valves Ltd., India
- 10) BHEL (Trichy), India
- 11) Econo Valves Pvt Ltd, India
- 12) Fouress Engg (I) Ltd (Aurangabad), India
- 13) Leader Valves Ltd, India
- 14) Oswal Industries Ltd, India
- 15) Petrochemical Engineering Enterprises, India (Fouress Group)
- 16) Sakhi Engineers Pvt Ltd., India
- 17) Shalimar Valves Pvt Ltd., India
- 18) Steel Strong Valves India Pvt Ltd, India
- 19) Petro Valves Pvt. Limited, Ahmedabad
- 20) Fluid Line Valves Co. (P) Ltd., India
- 21) MICON Engineers (Hubli) (P) Ltd., India
- 22) M/s KF Industries Alberta, Canada
- 23) M/s Shayburg Valves Pvt. Limited, Navi Mumbai
- 24) M/s JC Fabrica de Valvulas, S.A Barcelona Spain

VIII) CHECK VALVES

- 1) M/s Malbranque (France)
- 2) M/s Mannesmann Demag (Germany)
- 3) M/s Petrol Valve (Italy)
- 4) M/s True Flow Rona (Belgium)
- 5) M/s L&T (Audco) India Ltd. (Chennai)
- 6) M/s BHEL, OFE & OE Group (New Delhi)
- 7) M/s Advance valves Pvt Ltd.
- 8) M/s A V Valves Ltd.
- 9) M/s BDK Engineering Industries Ltd. India
- 10) M/s Foress Engg (I) Ltd. (Aurangabad)
- 11) M/s Valvitalia Italy
- 12) M/s KSB Pumps Ltd. Loimbattore), India
- 13) M/s Nandina Iron & Steels
- 14) M/s Nitcon valve Industries Pvt. Ltd. India
- 15) M/s Oswal Industries Ltd. India
- 16) M/s Panchvati Valves & Flanges Pvt. Ltd. India
- 17) M/s Petrochemical Engineering Enterprises, India
- 18) M/s Sakhi Engineers Pvt. Ltd.
- 19) M/s Shalimar Valves Pvt. Ltd.
- 20) M/s Steel Strong valves India Pvt. Ltd., India
- 21) M/s Neco schubert & Salzer Ltd., New Delhi
- 22) M/s Precision Engg.Co., Mumbai
- 23) M/s Leader Valves Ltd., Jalandhar
- 24) M/s Niton Valves Industries (P) Ltd., Mumbai
- 25) M/s Aksons & Mechanical Enterprises, Mumbai
- 26) M/s Datre Coroportion Limited, Calcutta
- 27) Econo Valves Pvt Ltd, India
- 28). NSSL Ltd. (Neco Schubert & SalzerLtd)
- 29) Fluid Line Valves Co. (P) Ltd., India
- 30) MICON Engineers (Hubli) (P) Ltd., India
- 31) M/s Petro valves

IX) PRESSURE SAFETY/RELIEF VALVES

- 1) M/s Keystone Valves (India) Pvt. Ltd.
- 2) M/s Larson & Toubro Ltd.
- 3) M/s Mekaster Engg Ltd..
- 4) M/s Tyco Sanmar Ltd. (New Delhi)
- 5) M/s Anderson Greenwood Crosby
- 6) M/s BHEL (Trichy)
- 7) M/s Curtiss Wright Flow Control Corporation
- 8) M/s Dresser Inc.
- 9) M/s Fukui Seisakusho Co. Ltd
- 10) M/s Finger Lesser GmbH & Co KG
- 11) M/s Nakakita Seisakusho Co Ltd
- 12) M/s Nuovo Pignone SPA (Italy) (GE Oil co)
- 13) M/s Parcol SPA
- 14) M/s Safety Systems UK Ltd
- 15) M/s Tai Milano SPA
- 16) M/s Weir Valves & Controls France
- 17) M/s Bliss Anand Pvt Ltd.

- 18) Instrumentation Limited
- 19) Emerson Process, Singapore
- 20) Sebim Sarasin Valves India (P) Ltd.
- 21) M/s Technical
- 22) M/s Vanaz

X) RTDs

1. M/s General Instruments Ltd., Mumbai
2. M/s Toshniwal Industries
3. M/s Tempsens
4. M/s Pyro Electric
5. ABB Automation Ltd
6. Altop Industries Ltd
7. Bourdon Haenni S.A.
8. Japan Thermowell Co Ltd- No web page found
9. Tecnomatic SPA
10. Thermo Electric Co. Inc.
11. Thermo-Couple Products Co – web page not found
12. Thermo-Electra B.V.
13. Wika Alexander Wiegand & Co GmbH
14. M/s Nagman Sensors (Pvt.) Ltd.

XI) PRESSURE, DIFF PRESSURE & TEMPERATURE TRANSMITTER

1. M/s Emerson Rosemount
2. M/s Yokogawa
3. M/s Fuji
4. M/s Honeywell
5. M/s Siemens
6. M/s. ABB
7. M/s Druck
8. M/s WIKA

XII) PRESSURE GAUGES, D. P. GAUGES & TEMPERATURES GAUGES

1. M/s AN Instruments Pvt. Ltd., New Delhi
2. M/s General Instruments Ltd., Mumbai
3. M/s WIKA
4. M/s Forbes Marshall
5. M/s Hirelkar
6. M/s Baumer
7. Badotherm Process Instruments B.V.
8. British Rototherm Co Ltd
9. Budenberg Gauge Co Ltd
10. Dresser Inc
11. H. Guru Instruments (South India) Pvt Ltd
12. Manometer (India) Pvt Ltd
13. Nagano Keiki Seisakusho Ltd

14. Waaree Instruments Ltd
15. Walchandnagar Industries Ltd (Tiwac Divn)
16. Ashcroft India Pvt Ltd
17. ALTOP

XIII) SS VALVES, SS TUBE & SS TUBE FITTINGS

1. M/s Swagelok (USA)- Fittings & Valves
2. M/s Parker (USA) - Fittings & Valves
3. M/s Sandvik, Sweden – SS tubes
4. M/s Ratnamani (SS tubes)
5. M/s Steamline Industries (SS tubes)
6. M/s HOKE (USA)- Fittings
7. M/s Hylok (Fittings)
8. M/s Dk-Lok (Fittings)
9. M/s Tube cex (SS tube)
10. M/s SSP (Fittings & valves)
11. Heavy Metals & Tubes Ltd. (SS tubes)
12. M/s Arya Crafts & Engg.Pvt. Ltd (SS Valves & SS Manifolds)
13. Swastic Engineering Works, India(SS Valves & SS Manifolds)
14. Comfit (SS Fittings, SS Valve and SS Manifolds)
15. M/s Aura Inc (SS Fittings, SS Valve and SS Manifolds)

XIV) JUNCTION BOXES AND CABLES GLANDS

1. M/s EX-PROTECTA
2. M/s FLAMEPROOF CONTROL GEARS
3. M/s BALIGA
4. M/s FLEXPLO ELECTRICAL
5. M/s. Sudhir Switchgears Pvt Ltd, India

XV) LEL DETECTION SYSTEM

1. Crowcon Detection Instruments Ltd
2. Detection Instruments (I) Pvt Ltd
3. Detector Electronics Corporation
4. Drager Safety AG & Co. KGAA
5. General Monitors Ireland Ltd
6. Mine Safety Appliances Company
7. MSA – Mines safety appliances(India) ltd
8. Industrial Scientific Oldham France S.A.
9. Riken Keiki Co Ltd
10. Simrad Optronics Icare
11. Honeywell Analytics
12. Net Safety Monitoring Inc.
13. Simtronics SAS
14. ESP Safety Pvt.Limited
15. Sieger
16. Detronics
17. Khrome Schloder

XVI) SOLAR POWER SYSTEM

1. TATA BP SOLAR (I) LTD.
2. REIL, JAIPUR
3. CEL, SAHIBABAD
4. HBL
5. EMMVEE TOUGHENED GLASS AND PHOTOVOLTAICS PRIVATE LIMITED
6. SHRINAGAR ENGG & ENERGY SYSTEMS PRIVATE LIMITED

XVII) BATTERY

1. EXIDE
2. HBL
3. AMAR RAJA
4. AMCO

XVIII) BARRIERS

1. M/s MTL
2. M/s P&F
3. M/s Phoenix

XIX) PIPE CARBON STEEL TO INDIAN STANDARDS

1. A.S.T. PIPES PVT. LTD. (AST GROUP)
2. ADVANCE STEEL TUBE LTD.
3. APL APOLLO TUBES LTD. (ER. BIHAR TUBES LTD.)
4. ASIAN MILLS PVT. LTD.
5. ASRANI TUBES LIMITED
6. DADU PIPES (P) LTD.
7. ESSAR STEEL LIMITED(ER HAZIRA PIPES MILL)
8. GAURANG PRODUCTS PVT LTD. (AST GROUP)
9. GOODLUCK STEEL TUBES LTD.
10. HI-TECH PIPES LIMITED
11. INDUS TUBE LIMITED
12. JINDAL INDUSTRIES LTD
13. JINDAL PIPES LTD.
14. JINDAL SAW LTD (KOSI WORKS)
15. JOTINDRA STEEL & TUBE LTD
16. LALIT PIPES AND PIPES LTD.
17. MAHARASHTRA SEAMLESS LTD.
18. MAN INDUSTRIES (INDIA) LTD. – PITHAMPUR
19. MAN INDUSTRIES (INDIA) LTD. ANJAR
20. MUKAT TANKS & VESSELS LTD.
21. NEZONE TUBES LIMITED
22. NORTH EASTERN TUBES LIMITED
23. PRATIBHA INDUSTRIES LIMITED
24. PRATIBHA PIPES & STRUCTURAL LTD.
25. PSL LTD (CHENNAI)
26. PSL LTD (V1, V2 & NC)
27. RAMA STEEL TUBES LTD.
28. RATNAMANI METALS AND TUBES LTD.

29. RAVINDRA TUBES LIMITED
30. SAMSHI PIPE INDUSTRIES LIMITED
31. SURYA ROSHNI LTD.
32. SWASTIK PIPES LTD.
33. UTKARSH TUBES & PIPES LTD. (FORMLY BMW)
34. WELSPUN CORP. LIMITED (DAHEJ)
35. ZENITH BIRLA (INDIA) LIMITED

XX PIPE & TUBULARS TO A.P.I. STANDARDS

1. ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA, ROMANIA
2. BHEL (TRICHY),INDIA
3. DALMINE SPA (ENQUIRY TO TENARIS),UAE
4. EEWKOREA CO. LTD (GERMANY), KOREA
5. EEW KOREA CO. LTD. (KOREA), KOREA
6. EISENBAU KRAMER GMBH, GERMANY
7. HYUNDAI RB CO. LTD. SOUTH KOREA
8. ILVA LAMIERE E TUBI SRL (ENQ TO ILVA SPA, ITALY
9. INOX TECH. SPA, ITALY
10. ISMT LTD. AHMEDNGR, INDIA
11. ISMT LTD. BARAMATI, INDIA
12. JINDAL PIPES LTD., INDIA
13. JINDAL SAW LTD. (KOSI WORKS), INDIA
14. JINDAL SAW LTD. (NASHIK WORKS), INDIA
15. LALIT PIPES AND PIPES LTD. INDIA
16. MAHARASHTRA SEAMLESS LTD., INDIA
17. MAN INDUSTRIES (I) LTD. (PITHAMPUR), INDIA
18. MUKAT TANKS & VESSELS LTD., INDIA
19. PRATIBHA INDUSTRIES LIMITED, INDIA
20. RATNAMANI METALS AND TUBES LTD., INDIA
21. SIDERCA S.A.I.C (ENQUIRY TOTENARIS), UAE
22. SUMITOMO METAL IND. LTD., INDIA
23. SURYA ROSHNI LTD., INDIA
24. SWASTIK PIPES LTD, INDIA
25. TATA STEEL UK LIMITED (FORMERLY C702)
26. TUBOS DE ACERO DE MEXICO SA (ENQ. TENARIS), UAE
27. TUBOS REUNIDOS SA SPAIN
28. UMRAN STEEL PIPE INC (TURKEY), TURKEY
29. VALCOVNY TRUB CHOMUTOV, CZECH REPUBLIC
30. VALLOUREC AND MANNESMANN TUBES, FRANCE
31. WELSPUN CORP LIMITED (DAHEJ), INDIA.

XXI PIPE/TUBE CS (SEAMLESS) TO ASTM STDS

1. ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA, ROMANIA
2. BHEL (TRICHY), INDIA
3. CHANGSHU SEAMLESS STEEL TUBE CO. LTD., CHINA
4. DALMINE SPA (ENQUIRY TO TENARIS, UAE
5. HEAVY METALS & TUBES LIMITED (MEHSANA), INDIA
6. ISMT LTD. AHMEDNGR, INDIA
7. ISMT LTD. BARAMATI INDIA
8. JFE STEEL CORPORATION, UAE
9. JINDAL SDAW LTD (NASHIK WORKS) INDIA

ANNEXURE – IV

10. KLT AUTOMOTIVE AND TUBULAR PRODUCTS LTD., INDIA
11. MAHALAXMI SEAMLESS LIMITED, INDIA
12. MAHARASHTRA SEAMLESS LTD, INDIA
13. PRODUCTS TUBULARES S.A.U, SPAIN
14. RATNADEEP METAL TUBES LTD., INDIA
15. STAINNEEST TUBES PVT LTD., INDIA
16. SUMITOMO METAL IND. LTD., INDIA
17. TUBOS REUNIDOS SA SPAIN
18. VALCOVNY TRUB CHOMUTOV, CZECH REPUBLIC
19. VALLOUREC ANDMANNESMANN TUBES FRANCE
20. YANGZHOU CHENGDE STEEL PIPE CO. LTD DUBAI (UAE)

XXII PIPE CARBON STEEL (WELDED) TO ASTM STDS

1. EEW KOREA CO. LTD. (GERMANY), KOREA
2. EEW KOREA CO. LTD. (KOREA), KOREA
3. EISENBAU KRAMER GMBH, GERMANY
4. HYUNDAI RB CO. LTD., SOUTH KOREA
5. INOX TECH. SPA, ITALY
6. JINDAL SAW LTD (KOSI WORKS), INDIA
7. LALIT PIPES AND PIPES LTD., INDIA
8. MAN INDUSTRIES (I) LTD.(PITHAMPUR), INDIA
9. MAN INDUSTRIES (INDIA) LTD. ANJAR, INDIA
10. MUKAT TANKS & VESSELS LTD., INDIA
11. RATNAMANI METALS AND TUBES LTD., INDIA
12. SUMITOMO METAL INDIA LTD., INDIA
13. TATA STEEL UK LIMITED

XXIII FLANGES

1. M/s Aditya Forge Ltd., Vadodara
2. M/s Amforge Industries Ltd., Mumbai
3. M/s CD Engineering Co., Ghaziabad
4. M/s Echjay Forgings Pvt. Ltd. (Bombay), Mumbai
5. M/s Echjay Industries Ltd., Rajkot
6. M/s Forge & Forge Pvt. Ltd., Rajkot
7. M/s Golden Iron & Steel Works, New Delhi
8. M/s JK Forgings, New Delhi
9. M/s Metal Forgings Pvt. Ltd., Mumbai
10. M/s Perfect Marketings Pvt. Ltd., New Delhi
11. M/s Sky Forge, Faridabad
12. M/s S&G, Faridabad
13. Chaudhry Hammer Works Ltd., India
14. JAV Forgings (P) Ltd., India
15. Kunj Forgings Pvt Ltd., India
16. MS Fittings Mgf. Co. Pvt. Ltd.
17. R.N. Gupta & Co. Ltd, India
18. R.P. Engineering Pvt Ltd, India
19. Sanghvi Forgings & Engineering Ltd.
20. Shri Ganesh Forgings Ltd., India
21. Uma Shankar Khandelwal & Co., India
22. Sawan Engineers, Baroda

23. Stewarts & Lloyds of India Ltd., Kolkata
24. Engineering Services Enterprises
25. Abasi Engineering Works, India
26. Anandmayee Forgings Pvt. Ltd., India
27. CD Industries., India
28. Fivebros Forgings Vot Ltd., India
29. Good Luck Engineering Co., India
30. Korea Flange, South Korea
31. Lal Metal Forge Ltd, India
32. Melesi Officine
33. Amlrojje Melesi & C. srl. Italy
34. Nicola Galperti & Figlio S.P.A India
35. Paramount Forge, India
36. Pradeep Metal Limited, India
37. Punjab Steel Works (the), India
38. R.D.Forge, India
39. Shah Industrial & Comml. Corporation, India
40. Ulma Forja S. Coop.
41. Vivial Forge Pvt. Ltd., Vadodara

XXIV FITTINGS

1. M/s Commercial Supplying Agency, Mumbai
2. M/s Dee Development Engineers Ltd.
3. M/s Eby Industries, Mumbai
4. M/s Flash Forge Pvt. Ltd., Vishakhapatnam
5. M/s Gujarat Infra Pipes Pvt. Ltd., Vadodara
6. M/s M.S. Fittings Mfg. Co. Pvt. Ltd., Kolkata
7. M/s Stewarts & Lloyds of India Ltd., Kolkata
8. M/s Teekay Tubes Pvt. Ltd., Mumbai
9. M/s Pipe Fit, Baroda
10. M/s Sky Forge, Faridabad
11. M/s S&G, Faridabad
12. M/s Sawan Engineers, Baroda
13. Eby Fasteners, India
14. R.N. Gupta & Co. Ltd, India
15. Exten Engg. Pvt. Ltd.,
16. Sivananda Pipe & Fittings Ltd.
17. Chero Piping SPA, Italy
18. CSA Fittings, India
19. EBY Fasteners, India
20. Fittnox SRL, Italy
21. Keonsae High Pressure Co. Ltd., South Korea
22. Munro & Miller Fittings Ltd., U.K.
23. TK Corporation, South Korea
24. Tube Turn (India) Pvt. Ltd., India
25. Topaz Piping Industries, India
26. Technoforge SPA, Italy
27. P.K. Tubes & Fittings Pvt. Ltd., India
28. Vivial Forge Pvt. Ltd., Vadodara

XXV GASKETS


1. IGP Engineers (P) Ltd., Madras
2. Madras Industrial Products, Madras
3. Dikson & Company, Bombay
4. Banco Products (P) Ltd., Vadodara
5. Goodrich Gaskets Pvt. Ltd.,
6. Starflex Sealing India Pvt. Ltd., India
7. Teekay Meta Flex Pvt. Ltd.,
8. UNIKLINGER Ltd
9. HEM Engg. Corp.
10. Unique Industrial Packing Pvt. Ltd.

XXVIII FASTENERS

1. Nireka Engg. Co. (P) Ltd., Calcutta
2. Precision Taps & Dies, Bombay
3. AEP Company, Vithal Udyoug Nagar
4. Fix Fit Fasteners, Calcutta
5. Precision Engg. Industries, Baroda
6. Echjay Forgings Pvt. Ltd., Bombay
7. Capital Industries, Bombay
8. Boltmaster India Pvt. Ltd., India
9. Deepak Fasteners Limited, India
10. Fasteners & Allied Products Pvt. Ltd., India
11. Hardwin Fasteners Pvt. Ltd., India
12. J.J. Industries, India
13. Multi Fasteners Pvt. Ltd., India
14. Nexo Industries, India
15. Pacific Forging & Fasteners Pvt. Ltd., India
16. Pioneer Nuts & Bolts Pvt. Ltd., India
17. Precision Auto Engineers, India
18. President Engineering Works, India
19. Sandeep Engineering Works, India
20. Syndicate Engineering Industries, India
21. BEA SRL, Italy
22. Korea Parts & Fasteners (KPF), South Korea
23. Kundan Industries Ltd., India
24. Mega Engineering Pvt. Ltd., India
25. OME Metallurgica ERBESE S.R.L, Italy
26. Pankaj International, India
27. Udehra Fasters Ltd., India

SLAM SHUT VALVES

UNITS : Flow > Liquid - m³/hr , Gas-SCMH, Steam - kg/hr. Pressure -> kg/cm²(g), Temperature-°C, Level/ Length-> mm


Sl. No.	DESCRIPTION	TECHNICAL REQUIREMENTS
1	Tag No.	SDV -** / SDV - ** (Quantity as per P& ID)
2	Line Size & Sch.	** , S80 for 0" to 1.5" line size & S40 for 2" to 6" line size
3	Services	NATURAL GAS
4	Type of Valve	* (Integral with Pressure Control Valve-Monitor)
5	Body Size	*
6	End connection	FLANGED * , 300# RF 125 AARH
7	Body Material	ASTM A 216 Gr. WCB
8	Trim Material	SS 316
9	Impulse Connection	*
10	Spring Range	1.0 - 7.0 Kg/Cm2(g)
11	Accuracy	1% OF SET PRESSURE OVER WHOLE RANGE
12	Pressure Drop	<0.3
13	Type of Actuator:	STD PILOT PILOT
14	Limit Switches	YES REQUIRE , ONE EACH FOR OPEN / CLOSE POSITION
15	Manual Reset	Yes , Required
16	Failure Position	CLOSE , TIGHT SHUT OFF
17	Position Indicator	YES , REQUIRED
18	Closing Time	LESS THAN 2 SEC
19	Fluid & State	DRY NATURAL GAS
20	Temperature ° C	Working Design
21	Inlet Pressure : MIN / NORMAL / MAXIMUM	**
22	FLOW : MIN / NORMAL / MAXIMUM	**
23	Design Pressure	49bar for DRS
24	Operating S.G	#
25	Molecular Weight	#
26	Cp/CV	#
27	Compressibility Factor	#
28	Shut Off Pressure	HI SET POINT : 5.5 kg/cm2(g) / 6 kg/cm2(g), LOW SET POINT : 2.9 kg/cm2(g) HOWEVER THE SETPOINTS WILL BE FINALISED DURING ENGG. (Note 5)
29	RADIOGRAPHY (100%)	REQUIRED
<p>NOTES: **** As per P & ID, ** - By vendor, #Refer Annexure -III</p>		
<p>1. VENDOR SHALL FURNISH A SCHEMATIC INDICATING ALL THE IMPULSE LINE CONNECTIONS, LOCATIONS ,MIN. DISTANCES AND SIZES TO THE MAIN VALVE AND TO THE SLAM SHUT VALVES.</p>		
<p>2. VENDOR SHALL FURNISH SIZING CALCULATIONS ALONGWITH OFFER.</p>		
<p>3. FOR TECHNICAL SPECIFICATIONS AND QUANTITY FOR LIMIT SWITCHES. REFER DATASHEET OF LIMIT SWITCH.</p>		
<p>4. SDV SHALL BE AS PER EN /EQVT STD.</p>		
<p>5. SET POINTS SHALL BE FIELD ADJUSTIBLE. VENDOR SHALL INDICATE THE ADJUSTIBLE RANGE OF OFFERED VALVE.</p>		
0	DATA SHEET OF SLAM SHUT VALVES	 MECON LTD. BANGALORE
Rev.	DISTRICT REGULATORY SKID (DRS)	DS No: MEC/23RT/01/E5/D2/DRS /TE/0503

PRESSURE CONTROL VALVES (DRS)UNITS : Flow > Liquid - m³/hr , Gas-SCMH, Steam - kg/hr. Pressure -> kg/cm²(g), Temperature-°C, Level/ Length-> mm

		PCV- Active		PCV - Monitor with Integral SSV			
		PCV- *** (Quantity as per P& ID)		PCV - ** (Quantity as per P& ID)			
General	01	Tag No.					
	02	Inlet Line No.					
	03	Outlet Line No.					
	04	Line Size	Schedule	**	S80 for 0" to 1.5" line size S40 for 2" to 6" line size	**	S80 for 0" to 1.5" line size S40 for 2" to 6" line size
	05	Inlet Line I.D.	Outlet Line ID	*	*	*	*
	06	Service					
Valve	07	Regulation		PR. REDUCTION (ACTIVE) DOWN STREAM		PR. REDUCTION (MONITOR) and SHUT-OFF DOWN STREAM	
	08	Type of Regulator : STD	Pilot Op.	Globe	PILOT	Globe	PILOT
	09	Body Size	Port Size	*	*	*	*
	10	End Conn : Flgd. Size & Rating		*	300#	*	300#
	11	Facing & Finish			RF 125 AARH		RF 125 AARH
	12	Body Material			ASTM A216 GR. WCB		ASTM A216 GR. WCB
	13	Trim Material			SS 316		SS 316
	14	Bonnet Type					
	15	Impulse Connecn. Int.	Ext.		EXTERNAL		EXTERNAL
	16	Connection Size & Type if External		*	**	*	**
	17	Material of Diaphragm		*	Nitrile	*	Nitrile
	18	Other Wetted Parts		*	SS 316	*	SS 316
	19	Soft Seating	Material	*	*	*	*
	20	ANSI Leakage Class			CLASS VI		CLASS VI
Options	21	Failure Position		ACTIVE- FO		MONITOR-FC	
	22	Solenoid Valve					
	23	I/P Converter					
	24	Filter With Gauge					
Service Conditions	25	Limit Switch/ Proximity Switch		Not Required		YES REQUIRED FOR SHUT-OFF VALVE - ONE EACH FOR OPEN / CLOSE POSITION	
	26	Fluid	State	NATURAL GAS VAPOUR		NATURAL GAS VAPOUR	
	27	Flow Liquid_Min	Normal / Max				
	28	Flow Vapour_Min	Normal / Max	**	**	**	
	29	Flow Water_Min	Normal / Max				
	30	Inlet Pr. Min	Normal / Desn.		** 49	** 49	
	31	Outlet Pr. Min	Normal / Max		**	**	
	32	Delta Pr. Shut Off		49		49	
	33	Temp. °C Oper.	Max	65	0-50	65	0-50
	34	Oper. S.G.	Mol. Wt.	#	#	#	#
35	CP/ CV	Compresibility Factor	#	#	#	#	
36	Flash %	Visc. (cP)	#	#	#	#	
37	Maximum Flow Capacity			*		*	
38	PCV Set Point			** (NOTE -2)		** (NOTE -2)	
39							
Valve Data	40	Cv. Min.	Cv. Max.	*	*	*	*
	41	Cv. Nor.	Selected Cv.	*	*	*	*
	42	Predicted Sound Level DBA			*		*
	43	Inlet Velocity M/S			*		*
Model Nos.	44	Valve	Actuator	*	*	*	*
	45	Positioner	Limit Switch	*	--	*	--
	46	100% Radiography					

Notes: *** AS per P& ID # Refer Annexure -III

- * - TO BE FURNISHED BY THE VENDOR.
- SPRING SHALL BE SUITABLE TO ADJUST SET PR. FROM 1 TO 7 KG / CM2(g). SET POINT OF MONITOR AND ACTIVE REGULATOR BY VENDOR.
- VENDOR SHALL FURNISH A SCHEMATIC INCLUDING ALL THE IMPULSE LINE CONNECTIONS. LOCATION AND SIZES TO THE MAIN VALVE AND TO THE PILOT INLET/OUTLET VALVE.
- ACCURACY OF REGULATION SHALL BE BETTER THAN ± 2.5% OF THE SET PRESSURE.
- VENDOR SHALL FURNISH THE SIZING CALCULATIONS ALONG WITH THE QUOTE.
- VENDOR SHALL FURNISH SPRING RANGES ALONG WITH OFFER
- THE SELECTED SIZE & MODEL SHALL BE SUCH THAT THE PRESSURE CONTROL VALVE MUST OPERATE AND CONTROL AT BOTH MIN. AND MAX. FLOW RATE AS INDICATED WITH THE GIVEN PRESSURE CONDITIONS.
- THE SELECTED MODEL SHALL BE OF PILOT OPERATED (GLOBE TYPE) WITH EN 334 APPROVAL.
- IN ANY CASE THE SIZE OF PCV SHALL NOT BE LESS THAN 1" SIZE.

0		DATA SHEET OF PRESSURE CONTROL VALVES	
Rev.		DISTRICT REGULATORY SKID (DRS)	DS No: MEC/23RT/01/E/5/D2/DRS /TE/0502