

## CERTIFICATE OF ACCEPTANCE

This is to certify that Supplier Technical Assessment Record (STAR) for TAMAP Level-2 (Pending) has been awarded to:

# HAWA Valves (India) Pvt. Ltd

Manufacturing location:

R-16 TTC Industrial Area, Rebale, Thane Belapur Road, 400 701 Navi Mumbai, India

Based on the Technical Qualification carried out in October 2011 in accordance with testing procedure SPE 77/300 dated September 2010 has been accepted by Shell Global Solutions International B.V. based on successful Type Acceptance Testing (TAT) result of:

TAT-16

TAT-17 TAT-18

TAT-18

TAT-20

TAT-21

DN20xDN15 pressure class 600; metal seated, floating Ball valve with MESC - 77.03.25.XXX.X (item-1) DN20xDN15 pressure class 600; soft seated, floating Ball valve with MESC - 77.03.25.104.1 (item-2) DN20xDN15 pressure class 2500; metal seated, floating Ball valve with MESC - 77.03.25.254.1 (item-3) DN20xDN15 pressure class 1500; metal seated, floating Ball valve with MESC - 77.03.25.454.1 (item-4) DN100 pressure class 300; soft seated, floating Ball valve with MESC - 77.00.35.XXX.X (item-5)

DN50 pressure class 1500; trunnion mounted Ball valve with MESC - 77.03.69.708.1 (item-7)

TAT Date:

From 12<sup>th</sup> to 19<sup>th</sup> of October 2011 (week 41 & 42)

Technical Audit was carried out in May 2010 (report GS.10.52766) and status is Pending until satisfactory closed out.

The STAR Level-2 (Pending) rating in the Shell Global Solutions Technically Accepted Manufacturers And Products (TAMAP) database is applicable to the MESC Sub-sub Groups, listed in Technical Specification MESC SPE 77/300B in accordance with tested valve descriptions on pages 2 to 4.

Restrictions / Conditions Applicable:	Valves have been tested to extended temperature ranges as indicated in MESC buying description on project request. For test valve item 05, the tested valves had an integral bonnet design, however tested to -50°C; therefore also qualifies bolted bonnet design
Shell GSI report: SR.11.13371	Original acceptance: 19-10-2011
Shell GS contract: 138174	Current certificate: 19-10-2016
Acceptance certificate: 2011-10-019	Certificate expiry: 19-10-2021
	Issued by Shell Global Solutions International B.V. PTE-EMMI

Name:

Rob Hengst, GSNL-PTE/EMMI



### The valve qualification range according to the following tested valves:

#### Item-01: DN20xDN15 pressure class 600; metal seated, floating Ball valve with MESC - 77.03.25.XXX.X

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TAT-16	Technical Classification Code:	BA-FL-MT-UD-SB-BB-XX-I17292-ST
	Product Group Description	Flanged, split body, bolted bonnet, metal seated, floating Ball valve, reduce bore with 2-piece body and body cavity relief Design to ISO 17292; sour service, NACE MR-01-75 (ver. 2002) Body material: ASTM A182 Grade F316 Ball material: ASTM A182 Grade F316L + Stellite-12 Stem material: : ASTM A182 Grade F316L Seat ring material: ASTM A182 Grade F316L Seat hard overlay material: Stellite-6 Seal material: PEEK
	Shell Fugitive Emission Class:	A(HS)
	Test Temperature Range:	From -50 °C to +250 °C
	Size and Pressure Range:	Internal bore: DN15, DN20, DN25, DN40 & DN50 Pressure classes: 150, 300, 600 & 800
	Brand name & Model Designation:	Hawa Valves
	GA Drawing of TA-tested valve:	M-1430-01 with revision-00

#### Item-02: DN20xDN15 pressure class 600; soft seated, floating Ball valve with MESC - 77.03.25.104.1

TAT-17	Technical Classification Code:	BA-FL-ST-UD-SB-BB-CR-I17292-ST
	Product Group Description	Flanged, split body, bolted bonnet, soft seated, floating Ball valve, reduce bore with 2-piece body and body cavity relief Design to ISO 17292; sour service, NACE MR-01-75 (ver. 2002) Body material: ASTM A182 Grade F316 Ball material: ASTM A182 Grade F316L Stem material: : ASTM A182 Grade F316L Seat material: Filled PTFE Seal material: PEEK
	Shell Fugitive Emission Class:	A(HS)
	Test Temperature Range:	From -110 °C to +205 °C
	Size and Pressure Range:	Internal bore: DN15, DN20, DN25, DN40 & DN50 Pressure classes: 150, 300, 600 & 800
	Brand name & Model Designation:	Hawa Valves
	GA Drawing of TA-tested valve:	M-1430-02 with revision-00

Name: Roblesengst Date & Sign. 10.../1..../2010

#### Item-03: DN20xDN15 pressure class 2500; metal seated, floating Ball valve with MESC - 77.03.25.254.1

TAT-18	Technical Classification Code:	BA-FL-MT-UD-SB-BB-CR-I17292-ST
	Product Group Description	Flanged, split body, bolted bonnet, metal seated, floating Ball valve, reduce bore with 2-piece body and body cavity relief Design to ISO 17292; sour service, NACE MR-01-75 (ver. 2002) Body material: ASTM A182 Grade F316 Ball material: ASTM A182 Grade F316L + Stellite-12 Stem material: ASTM A182 Grade F316L Seat ring material: ASTM A182 Grade F316L Seal material: PEEK
	Shell Fugitive Emission Class:	A(HS)
	Test Temperature Range:	From -110 °C to +250 °C
	Size and Pressure Range:	Internal bore: DN15, DN20, DN25, DN40 & DN50 Pressure classes: 2500 only
	Brand name & Model Designation:	Hawa Valves
	GA Drawing of TA-tested valve:	M-1430-03 with revision-00

#### Item-04: DN20xDN15 pressure class 1500; metal seated, floating Ball valve with MESC- 77.03.25.454.1

TAT-19	Technical Classification Code:	BA-FL-MT-UD-SB-BB-CR-I17292-ST
1711 13	reclifical classification code.	DA-FL-WIT-OD-3B-BB-CR-I17292-31
	Product Group Description	Flanged, split body, bolted bonnet, metal seated, floating Ball valve, reduce bore with 2-piece body and body cavity relief Design to ISO 17292; sour service, NACE MR-01-75 (ver. 2002) Body material: ASTM A182 Grade F316 Ball material: ASTM A182 Grade F316 + Stellite-12 Stem material: : ASTM A182 Grade F316L Seat ring material: ASTM A182 Grade F316L Seal material: PEEK
	Shell Fugitive Emission Class:	A(HS)
	Test Temperature Range:	From -110 °C to +250 °C
	Size and Pressure Range:	Internal bore: DN15, DN20, DN25, DN40 & DN50 Pressure classes: 900 & 1500
	Brand name & Model Designation:	Hawa Valves
	GA Drawing of TA-tested valve:	M-1430-04 with revision-00

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#### Item-05: DN100 pressure class 300; soft seated, floating Ball valve with MESC - 77.00.35.XXX.X

TAT-20	Technical Classification Code:	BA-FL-ST-BD-SB-IB-XX-I17292-ST (tested)
	reciffical classification code.	BA-FL-ST-BD-SB-BB-XX-I17292-ST (qualified)
	Product Group Description	Flanged, split body, integral bonnet, soft seated, floating Ball valve, full bore with 2-piece body Design to ISO 17292; sour service, NACE MR-01-75 (ver. 2002) Body material: ASTM A350 Grade LF2 Class-1 Stem material: : ASTM A182 Grade F316L Ball material: ASTM A182 Grade F316L Seat ring material: Filled PTFE

Seal material: PEEK

From -50 °C to +150 °C

Size and Pressure Range: Internal bore: DN80, DN100, DN150 & DN200 Pressure classes: 150 & 300

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Brand name & Model Designation: Hawa Valves

Shell Fugitive Emission Class:

Test Temperature Range:

GA Drawing of TA-tested valve: M-1430-05 with revision-00

#### Item-07: DN50 pressure class 1500; trunnion mounted Ball valve with MESC - 77.03.69.708.1

TAT-21	Technical Classification Code:	BA-TR-ST-BD-SB-BB-XX-I14313-VH
	Product Group Description	Flanged, split body, bolted bonnet, soft seated, trunnion mounted Ball valve, full bore with 3-piece body Design to ISO 14313/API 6D; sour service, NACE MR-01-75 (version 2002) Body material: ASTM A182 Grade F51 Ball material: ASTM A182 Grade F51 Stem material: ASTM A182 Grade F51 Seat retainer material: ASTM A182 Grade F51 Seat insert material: PEEK Lip-seal material: RPTFE
	Shell Fugitive Emission Class:	A(HS)
	Test Temperature Range:	From -50 °C to +150 °C
	Size and Pressure Range:	Internal bore: DN40, DN50, DN80 & DN100 Pressure classes: 900 & 1500
	Brand name & Model Designation:	Hawa Valves
	GA Drawing of TA-tested valve:	M-1430-07 with revision-00

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