

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pipe Fitting

with type designation(s)
Crossovers and Pup Joints

Issued to

Weir Oil and Gas - Pressure Pumping
FORT WORTH, TX, United States

is found to comply with
DNV-OS-E101 Drilling Plant October 2013
and DNV GL AS' understanding of the implementation and interpretation of:
PSA's "Regulations relating to design and outfitting of the facilities etc. in the petroleum activities" (THE FACILITIES REGULATIONS), Last amended 16 December 2014, Ch.VIII

Application :

Compliance with quality control requirements specified in API 6A PSL 3 is mandatory if product is intended for wellhead and christmas tree or well control systems.
Compliance with quality control requirements specified in API 16C is mandatory if product is intended for C&K applications.

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This Type Approval Certificate is 25 pages long, and replaces D-6277 as issued on 2015-07-29.

This Certificate is valid until **2018-06-30**.

Issued at **Houston** on **2016-03-04**

DNV GL local station: **Approval CMC – Houston**

Approval Engineer: **M. Kevin Mandeville Jr.**

for **DNV GL**

Christian Nilsen
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Job Id:
Certificate No: **TAD00000AY**

Reference Standards

DNV GL's Standard for Certification No. 2.22 Lifting Appliances, Oct. 2011
API 6A, Specification for Wellhead and Christmas Tree Equipment, 20th Edition

Product description

Crossovers and pup joints: 1" 1502, 2" 1502, 2" 2002, 2" 2202, 3" 1002, and 3" 1502
Unions: 2" 1502 P.S. & Non P.S., 3" 1502 P.S. & Non P.S., 3" 1002 & 1502 Integral
2" 1502 Integral, 2" 1502 BW Sub, 2" 15K Safety Iron, 3" 15K & 30K Safety Iron
3" 1002, 1502 & 2002 BW Sub, 4" 1502 BW Sub, 4" 15K Safety Iron BW Sub
2", 3" & 4" Male Gage & Bull Plugs, 2", 3" & 4" Female Gage & Bull Plugs

Application/Limitation

<u>Description</u>	<u>Part No.</u>	<u>Service</u>	<u>Temp °C</u>		<u>Max</u> psi
			Min	Max	
Crossovers					
1" 1502 F x 2" 1502 M	3P12132	STD	0	110	15,000
1" 1502 F x 2" 1502 M LT	3P20876	STD	-30	110	15,000
2" 1502 F x F	2P10026	STD	-30	110	15,000
2" 1502 F x 2" 2002 F	3P19727	STD	-30	110	15,000
2" 1502 F x 3" 1502 F	3P19733	STD	-30	110	15,000
2" 1502 F x M	3P19345	STD	-30	110	15,000
2" 1502 F x M	3P21138	STD	-30	110	15,000
2" 1502 F x M	3P20539	STD	-30	110	15,000
2" 1502 F x M	3P23050	STD	-30	110	15,000
2" 1502 F x M	3P22600	STD	-30	110	15,000
2" 1502 F x M	3P23825	STD	-30	110	15000
2" 1502 F x M	3A20638	STD	-30	110	15,000
2" 1502 F x M	3P20634	STD	-30	110	15,000
2" 1502 F x M	3P22747	STD	-30	110	15,000
2" 1502 F x M	3P22745	STD	-30	110	15,000
2" 1502 F x M	3P23942	STD	-30	110	15,000
2" 1502 F x 1" 1502 M	3P12133	STD	0	110	15,000
2" 1502 F x 2" 2002 M	3P13622	STD	-30	110	15,000
2" 1502 F x 3" 1502 M	3P19732	STD	-30	110	15000
2" 1502 F x Sub/BW/Sch. 80	3P23918	STD	-30	110	15,000
2" 1502 M x 2" 2002F	3P19150	STD	-30	110	15,000
2" 1502 M x 3" 1502 F	3P19734	STD	-30	110	15,000
2" 1502 M x M	3P10027	STD	-30	110	15,000
2" 1502 M x M	3P20415	STD	-30	110	15,000
2" 1502 M x M	3P19665	STD	-30	110	15,000
2" 1502M x 2" 1502M	3L11571V	STD	-30	176	15,000
2" 1502M x 2" 1502M	3L11571	STD	-30	110	15,000
2" 1502 M x 2" 2002 M	3P19731	STD	-30	110	15,000
2" 1502 F x F-H2S	3P18499	H2S	-30	176	10,000
2" 1502 F x 2" 2202 F -H2S	3P10028	H2S	-30	176	10,000
2" 1502 F x 3" 1502 F -H2S	3P19736	H2S	-30	176	10,000
2" 1502 F x M-H2S	3P19455	H2S	-30	176	10,000

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Description	Part No.	Service	Temp °C		Max
2" 1502 M x F -H2S	3P20245	H2S	-30	176	10,000
2" 1502 F x M -H2S	3P20541	H2S	-30	176	10,000
2" 1502 F x M -H2S	3P20635	H2S	-30	176	10,000
2" 1502 F x M 6" Lg.	3A23131	STD.	0	100	15,000
2" 1502 F x M 9" Lg.	3A24739	STD.	0	100	15,000
2" 1502 F x M 12" Lg.	3A20998	STD.	-30	100	15,000
2" 1502 F x M 18" Lg.	2A28809LT	STD.	-30	100	15,000
2" 1502 F x M 24" Lg.	3A23824	STD.	-30	100	15,000
2" 1502 F x M 36" Lg.	3A23376	STD.	-30	100	15,000
2" 1502 F x M 36" Lg.-H2S	2A29967	H2S	-30	176	10,000
2" 1502 F x 2" 2202 M -H2S	3P19742	H2S	-30	176	10,000
2" 1502 F x 3" 2202 M	3P24057	H2S	-30	176	10,000
2" 1502 F x 3" 1502 M -H2S	3P19737	H2S	-30	176	10,000
2" 1502 M x 2" 2202 F -H2S	3P19152	H2S	-30	176	10,000
2" 1502 M x 3" 1502 F -H2S	3P19735	H2S	-30	176	10,000
2" 1502 M x 3" 1502 F -H2S	2P41579	H2S	-30	176	10,000
2" 1502 M x 3" 1502 M	3P19730	STD	-30	110	15,000
2" 1502 M x M -H2S	3P18500	H2S	-30	176	10,000
2" 1502 M x M -H2S	2P41581	H2S	-30	176	10,000
2" 1502 M x 2" 2202 M -H2S	3P19738	H2S	-30	176	10,000
2" 1502 M x 1" 1502 M -H2S	3P23234	H2S	-30	176	10,000
2" 1502 M x 1" 1502 M -H2S	3P23233	H2S	-30	176	10,000
2" 1502 M x 1" 1502 F -H2S	3P23449	H2S	-30	176	10,000
2" 1502 M x 3" 1502 M -H2S	3P19739	H2S	-30	176	10,000
2" 1502M x 4" 1502M	3A23087	STD	-30	110	15,000
2" 1502F x 2" 1502M x 40"Lg.	3A24741	STD	-30	110	15,000
2" 1502FxM x 48.0 Long - Viton	2A38088V	STD	-30	176	15,000
2" 1502FxM x 60.0 Long - Viton	2A38087V	STD	-30	176	15,000
2" 1502FxM x 96.0 Long - Viton	2A38086V	STD	-30	176	15,000
2" 1502FxM x 120.0 Long - Viton	2A38085V	STD	-30	176	15,000
2" 1502FxM x 12.0 Lg/LT - Viton	3A20998V	STD	-30	176	15,000
2" 1502FxM x 72.0 Long - Viton	2A37868V	STD	-30	176	15,000
2" 1502FxM x 28.5 Long	2A25787	STD	-30	110	15,000
2" 1502FxM x 12.5 Long	2A38400	STD	-30	110	15,000
2" 2002 F x F	3P19729	STD.	-30	110	20,000
2" 2002 F x M	3P10043	STD.	-30	110	20,000
2" 2002 M x M	3P13770	STD	-30	110	20,000
2" 2202 F x F-H2S	3P10029	H2S	-30	176	15,000
2" 2202 F x M-H2S	3P19743	H2S	-30	176	15,000
2" 2202 M x M -H2S	3P10909	H2S	-30	176	15,000
3" 1502 F x M x 24.0 Lg - Viton	2A29010V	STD	-30	176	15,000
3" 1502 F x M x 48.0 Lg - Viton	2A34098V	STD	-30	176	15,000
3" 1502 F x M x 60.0 Lg - Viton	2A38111V	STD	-30	176	15,000
4" 15K SBI x 112.88 Lg - Viton	2A38091V	STD	-30	176	15,000
3" 1502 F x M x 72.0 Lg - Viton	2A38108V	STD	-30	176	15,000

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Description	Part No.	Service	Temp °C		Max
3" 1502 F x M x 96.0 Lg - Viton	2A34139V	STD	-30	176	15,000
3" 1502 F x M 7" Lg./LT - H2S	3A21058	H2S	-30	176	10,000
3" 1502 F x M 12" Lg.	2A24351	STD.	0	100	15,000
3" 1502 F x M 12" Lg./LT - H2S	3P20573	H2S	-30	176	10,000
3" 1502 F x M 12" Lg./LT - H2S	2A27034	H2S	-30	176	10,000
3" 1502F x M 17" Lg	2A40094	H2S	-30	176	10,000
3" 1502 F x M 24" Lg.	3A23861	STD.	0	100	15,000
3" 1502 F x M 36" Lg.	2A25597	STD.	0	100	15,000
3" 1502 F x M 12" Lg.	2A29009	STD.	-30	100	15,000
3" 1502 F x M 24" Lg.	2A29010	STD.	-30	100	15,000
3" 1502 F x M 24" Lg./LT - H2S	2A27030	H2S	-30	176	10,000
3" 1502 F x M 36" Lg.	2A29011	STD.	-30	100	15,000
3" 1502 F x F	3P19728	STD	-30	110	15,000
3" 1502 F x M	3P19744	STD.	-30	110	15,000
3" 1502 MxF Ball Catcher	2A25685	H2S	-30	176	10,000
3" 1502 M x M	3P19726	H2S	-30	176	10,000
3" 1502 F x F-H2S	3P19741	H2S	-30	176	10,000
3" 1502 F x M-H2S	3P19745	H2S	-30	176	10,000
3" 1502 M x M -H2S	3P19740	H2S	-30	176	10,000
3" 1502 M x 3" 602 M -H2S	3P22897	H2S	-30	176	10,000
3" 1502 F x 3" 602 M -H2S	3P22880	H2S	-30	176	10,000
3" 1502 M x 3" 602 F -H2S	3P22888	H2S	-30	176	10,000
3" 1502 F x 3" 602 F -H2S	3P22504	H2S	-30	176	10,000
4-1502F x M x 72"Lg.	2A28630V	STD	-30	176	15,000
3-1502F x M x 7"Lg.	2A28918V	STD	-30	176	15,000
3-1502F x M x 24"Lg.	2A29010V	STD	-30	176	15,000
3-1502F x M x 36"Lg.	2A29011V	STD	-30	176	15,000
4-1502F x M x 12"Lg.	2A30625V	STD	-30	176	15,000
3-1502F x M x 48"Lg.	2A34098V	STD	-30	176	15,000
3-1502F x M x 120"Lg.	2A37183V	STD	-30	176	15,000
4"1502 F x 2"1502 M 7" Lg.	2A28858	STD	-30	110	15,000
4-1/16 BX155 x 4" 15K SBI/Vit/9.0"	2A36542V	STD	-30	176	15,000
5-1/8"-6BX169 x 4"-15K Safety Iron, 11" lg	2A42248	STD	-30	110	10,000
2" 15K Safety Iron x 2" 1502 M	2A27797	STD	-30	110	15,000
2" 15K Safety Iron x 2" 1502 F	2A27798	STD	-30	110	15,000
2" 15K Safety Iron x 3" 1502F	2P25324	STD	-30	110	15,000
2" 15K Safety Iron x 3" 1502 M	2A27800	STD	-30	110	15,000
3" 15K Safety Iron, 8.51"	2A29063	STD	-30	110	15,000
3" 15K Safety Iron, 13.63"	2A29422	STD	-30	110	15,000
3" 15K Safety Iron, 14.77"	2A28814	STD	-30	110	15,000
3" 15K Safety Iron, 16.00"	2A29130	STD	-30	110	15,000
3" 15K Safety Iron, 31.21"	2A28816	STD	-30	110	15,000
3" 15K Safety Iron, 31.25'	2A28995	STD	-30	110	15,000
3" 15K Safety Iron, 36.29"	2A28813	STD	-30	110	15,000
3" 15K Safety Iron, 40.61"	2A29064	STD	-30	110	15,000

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Description	Part No.	Service	Temp °C		Max
3" 15K Safety Iron, 45.52"	2A28833	STD	-30	110	15,000
3" 15K Safety Iron, 54.68"	2A28769LT	STD	-30	110	15,000
3" 15K Safety Iron, 90.00"	2A28770LT	STD	-30	110	15,000
3" 15K Safety Iron, 8.51"	2A29301	STD	-30	110	15,000
3" 15K Safety Iron, 48.00"	2A29352	STD	-30	110	15,000
3" 15K Safety Iron, 48.00"	2A29396BH	STD	-30	110	15,000
3" 15K Safety Iron, 60.00"	2A29397BH	STD	-30	110	15,000
3" 15K Safety Iron, 72.00"	2A29398BH	STD	-30	110	15,000
3" 15K Safety Iron, 84.00"	2A29399BH	STD	-30	110	15,000
3" 15K Safety Iron, 132.00"	2A29400BH	STD	-30	110	15,000
3" 30K Safety Iron, 36"	2A33007	STD	-30	110	30,000
3" 30K Safety Iron, 60"	2A33009	STD	-30	110	30,000
3" 30K Safety Iron, 120"	2A29953	STD	-20	160	30,000
3" 30K Safety Iron, 88"	2A29987	STD	-20	160	30,000
3" 30K Safety Iron, 84"	2A29988	STD	-20	160	30,000
3" 30K Safety Iron, 72"	2A29989	STD	-20	160	30,000
3" 30K Safety Iron, 48"	2A29990	STD	-20	160	30,000
3" 30K Safety Iron, 47"	2A29991	STD	-20	160	30,000
3" 30K Safety Iron, 43"	2A29992	STD	-20	160	30,000
3" 30K Safety Iron, 30"	2A29993	STD	-20	160	30,000
3" 30K Safety Iron, 24"	2A29994	STD	-20	160	30,000
3" 30K Safety Iron, 18"	2A29995	STD	-20	160	30,000
3" 30K Safety Iron, 15"	2A29996	STD	-20	160	30,000
3" 30K Safety Iron, 12"	2A29997	STD	-20	160	30,000
3" 30K Safety Iron, 9"	2A29998	STD	-20	160	30,000
3" 30K Safety Iron x API 12"Lg	2A30188	STD	-20	160	30,000
3" 15K Safety Iron x 2" 1502M, 6" long, Viton	2A27788V	STD	-30	176	15,000
4" 15K Safety Iron, 12.00"	2A28330	STD	-30	110	15,000
4" 15K Safety Iron, 14.00"	2A28165	STD	-30	110	15,000
4" 15K Safety Iron, 16.00"	2A28166	STD	-30	110	15,000
4" 15K Safety Iron, 23.75"	2A28465	STD	-30	110	15,000
4" 15K Safety Iron, 24.00"	2A28167	STD	-30	110	15,000
4" 15K Safety Iron, 30.00"	2A29361	STD	-30	110	15,000
4" 15K Safety Iron, 36.00"	2A28575	STD	-30	110	15,000
4" 15K Safety Iron, 36.00"	2A29401BH	STD	-30	110	15,000
4" 15K Safety Iron, 36.50"	2A29003	STD	-30	110	15,000
4" 15K Safety Iron, 48.00"	2A28831	STD	-30	110	15,000
4" 15K Safety Iron, 48.00"	2A29402BH	STD	-30	110	15,000
4" 15K Safety Iron, 60.00"	2A28873	STD	-30	110	15,000
4" 15K Safety Iron, 60.00"	2A29403BH	STD	-30	110	15,000
4" 15K Safety Iron, 60.25"	2A29005	STD	-30	110	15,000
4" 15K Safety Iron, 64.00"	2A29383	STD	-30	110	15,000
4" 15K Safety Iron, 67.75"	2A29241	STD	-30	110	15,000
4" 15K Safety Iron, 72.00"	2A28689	STD	-30	110	15,000

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Description	Part No.	Service	Temp °C		Max
4" 15K Safety Iron, 76.50"	2A29362	STD	-30	110	15,000
4" 15K Safety Iron, 78.50"	2A29319	STD	-30	110	15,000
4" 15K Safety Iron, 84.00"	2A28961	STD	-30	110	15,000
4" 15K Safety Iron, 84.00"	2A29404BH	STD	-30	110	15,000
4" 15K Safety Iron, 88.00"	2A28985	STD	-30	110	15,000
4" 15K Safety Iron, 90.00"	2A29176	STD	-30	110	15,000
4" 15K Safety Iron, 96.00"	2A28900	STD	-30	110	15,000
4" 15K Safety Iron, 96.00"	2A29405BH	STD	-30	110	15,000
4" 15K Safety Iron, 102.00"	2A28901	STD	-30	110	15,000
4" 15K Safety Iron, 102.75"	2A29363	STD	-30	110	15,000
4" 15K Safety Iron, 105.00"	2A28576	STD	-30	110	15,000
4" 15K Safety Iron, 108.00"	2A28690	STD	-30	110	15,000
4" 15K Safety Iron, 111.00"	2A29298	STD	-30	110	15,000
4" 15K Safety Iron, 113.50"	2A29364	STD	-30	110	15,000
4" 15K Safety Iron, 114.00"	2A29180	STD	-30	110	15,000
4" 15K Safety Iron, 120.00"	2A28902	STD	-30	110	15,000
4" 15K Safety Iron, 120.00"	2A29406BH	STD	-30	110	15,000
4" 15K Safety Iron, 132.00"	2A29407BH	STD	-30	110	15,000
4" 15K Safety Iron, 144.00"	2A28903	STD	-30	110	15,000
4"15K Safety Iron Anchor x4"1502M, 8.5"	2A28139	STD	-30	110	15,000
4"15K Safety Iron Anchor x4"1502M, 8.5"	2A28139V	STD	-30	176	15,000
4" 25K Safety Iron x API, H2S	2A30412	H2S	-20	176	25,000
4" 25K Safety Iron, 24" H2S	2A30429	H2S	-20	176	25,000
4" 25K Safety Iron, 48" H2S	2A30432	H2S	-20	176	25,000
4" 25K Safety Iron, 72" H2S	2A30434	H2S	-20	176	25,000
4" 25K Safety Iron, 129" H2S	2A30436	H2S	-20	176	25,000
3' 15K SBI x 2" 1502F	2A27785	STD.	-30	100	15,000
3" 15K SBI x 2" 1502 M	2A27788	STD.	-30	100	15,000
3" 15K SBI x 3' 1502F 5" Lg.	2A27901LT	STD.	-30	100	15,000
4" 15K SBI x 4" 1502F	2A28138	STD.	-30	100	15,000
4" 15K SBI x 3" 1502F	2A28156	STD.	-30	100	15,000
4" 15K SBI x 4" 1502M	2A29140	STD.	-30	100	15,000
3" 15K SBI x 3' 1502M	2A29333	STD.	-30	100	15,000
3" 15K SBI x 3' 1502F 42" Lg.	2A29465	STD.	-30	100	15,000
3" 15K SBI x 3' 1502F 16" Lg.	2A30278	STD.	-30	100	15,000
3" 15K SBI x 3' 1502F 5" Lg.	2A27900	STD.	-30	100	15,000
2" 15K SBI x 2" 1502M	2A27797	STD.	-30	100	15,000
4" 15K Safety Big Iron, 96.00" LG/VIT	2A28900V	STD.	-30	176	15,000
2" 1502 M x F, 8.56"	2A36347	STD.	-30	110	15,000
2" Fig. 1502F x 2" Fig. 1502M/LT, 6.00"	2A36351	STD.	-30	110	15,000
2" 1502 F x M 6.06"	2A37337	STD.	-30	110	15,000
2" Fig. 1502 F x M, 5.50"	2A37356	STD.	-30	110	15,000

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Description	Part No.	Service	Temp °C		Max
4" 15K Safety Big Iron, 10.25" lg	2A39462	STD.	-30	110	15,000
4" 15K Safety Big Iron, 10.25" lg, Viton	2A39462V	STD.	-30	176	15,000
4" 15K Safety Big Iron, 22.25" lg	2A39464	STD.	-30	110	15,000
4" 15K Safety Big Iron, 22.25" lg, Viton	2A39464V	STD.	-30	176	15,000
2" 1502 F x M 6.06"	2P36228	STD.	-30	110	15,000
2" 1502 F x M 5.5"	2P36229	STD.	-30	110	15,000
2" Fig. 1502M x 2" Fig. 1502F, 8.26"	2P36342	STD.	-30	110	15,000
4" 15K Safety Big Iron, 10.25"	2P39461	STD.	-30	110	15,000
4" 15K Safety Big Iron, 22.25"	2P39463	STD.	-30	110	15,000
2" 1502 M x 3" 1502F - 11.81LG/H2S	2A41580	H2S	-30	176	10,000
2" 1502 M x M -45.24" LG/H2S	2A41582	H2S	-30	176	10,000

Pup Joints

Description	Part No.	Service	Temp °C		Max
2" 1502 F x M 48"	2P19445	STD.	-30	110	15,000
2" 1502 F x M 60"	2P20386	STD.	-30	110	15,000
2" 1502 F x M 72"	2P19593	STD.	-30	110	15,000
2" 1502 F x M 90"	2P19446	STD.	-30	110	15,000
2" 1502 F x M 96"	2P19595	STD.	-30	110	15,000
2" 1502 F x M 114"	2P19596	STD.	-30	110	15,000
2" 2002 F x F	3P19729	STD.	-30	110	20,000
2" 2002 F x M	3P10043	STD.	-30	110	20,000
2" 1502 F x M 48" H2S	2P19450	H2S	-30	176	10,000
2" 1502 F x M 60" H2S	2P22080	H2S	-30	176	10,000
2" 1502 F x M 72" H2S	2P19720	H2S	-30	176	10,000
2" 1502 F x M 90" H2S	2P19451	H2S	-30	176	10,000
2" 1502 F x M 96" H2S	2P19721	H2S	-30	176	10,000
2" 1502 F x M 114" H2S	2P19722	H2S	-30	176	10,000
2-1502Fxm x 24.0 Long	2A38920	STD	-30	110	15,000
2-1502Fxm x 24.0 Long - Viton	2A38920V	STD	-30	176	15,000
2-1502Fxm x 36.0 Long	2A38921	STD	-30	110	15,000
2-1502Fxm x 36.0 Long - Viton	2A38921V	STD	-30	176	15,000
2-1502Fxm x 36.0 Long	2A38926	H2S	-30	176	10,000
2-1502Fxm x 24.0 Long	2A38925	H2S	-30	176	10,000
2" 15K Safety Iron 48"	2A27947	STD.	-30	110	15,000
2" 15K Safety Iron 90"	2A27950	STD.	-30	110	15,000
2" 15K Safety Iron 114"	2A27952	STD	-30	110	15,000
3" 1502 F x M 48" H2S	2P22051	H2S	0	176	10,000
3" 1502 F x M 60" H2S	2P22052	H2S	-30	176	10,000
3" 1502 F x M 48"	2P22045	STD.	-30	110	15000
3" 1502 F x M 60"	2P22046	STD.	-30	110	15,000
3" 1502 F x M 72"	2P22047	STD.	-30	110	15,000
3" 1502 F x M 90"	2P22048	STD.	-30	110	15,000
3" 1502 F x M 96"	2P22049	STD.	-30	110	15,000

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Description	Part No.	Service	Temp °C		Max
3" 1502 F x M 114"	2P22050	STD.	-30	110	15,000
3" 1502 F x M 72" H2S	2P22053	H2S	-30	176	10,000
3" 1502 F x M 90" H2S	2P22054	H2S	-30	176	10,000
3" 1502 F x M 96" H2S	2P22055	H2S	-30	176	10,000
3" 1502 F x M 114" H2S	2P22056	H2S	-30	176	10,000
3-1502Fxm x 36.0 Long - Viton	2A38936V	STD	-30	176	15,000
3-1502Fxm x 24.0 Long - Viton	2A38935V	STD	-30	176	15,000
3-1502Fxm x 36.0 Long	2A38936	STD	-30	110	15,000
3-1502Fxm x 24.0 Long	2A38935	STD	-30	110	15,000
3-1502Fxm x 24.0 Long	2A38939	H2S	-30	176	10,000
3" 1502 Pup 48" Lg.	2A20522	STD.	-30	110	15,000
3" 1502 Pup 48" Lg. Viton	2A20522V	STD.	-30	176	15,000
3" 1502 Pup 60" Lg.	2A24677	STD.	-30	100	15,000
3" 1502 Pup 60" Lg. Viton	2A24677V	STD.	-30	176	15,000
3" 1502 Pup 72" Lg.	2A20523	STD.	-30	100	15,000
3" 1502 Pup 72" Lg. Viton	2A20523V	STD.	-30	176	15,000
3" 1502 Pup 90" Lg.	2A20524	STD.	-30	100	15,000
3" 1502 Pup 90" Lg. Viton	2A20524V	STD.	-30	176	15,000
3" 1502 Pup 96" Lg.	2A20525	STD.	-30	100	15,000
3" 1502 Pup 96" Lg. Viton	2A20525V	STD.	-30	176	15,000
3" 1502 Pup 114" Lg.	2A20526	STD.	-30	100	15,000
3" 1502 Fxm Pup 36" Lg./LT - H2S	2P38938	H2S	-30	176	10,000
3" 1502 Fxm Pup 36" Lg./LT - H2S	2A38940	H2S	-30	176	10,000
3" 1502 Pup 114" Lg. Viton	2A20526V	STD.	-30	176	15,000

Non-Pressure Seal Piping

Description	Part No.	Service	Temp °C		Max
2" 1502 F x M	2L18372 R8	STD	-30	110	15,000
2" 1502 M x F	2L18003 R5	H2S	-30	176	10,000
3" 1502 F x M	2L18375 R5	STD	-30	110	15,000

Unions

Description	Part No.	Service	Temp °C		Max
2" 1502 PS	2A10223	STD	-35	110	15,000
2" 1502 NPS	2A10235	STD	-35	110	15,000
2" 1502 NPS	2A14932	H2S	-35	176	10,000
2" 1502 Integral		STD	-30	110	15,000
2" 1502 Integral	---	H2S	-30	176	10,000
2" 1502 BW STD Ass'y 1.75 I.D.	2A13672	STD	-35	110	15,000
2" 1502 BW STD Ass'y 1.75 I.D.	2A21136	H2S	-35	176	10,000
2" 1502 BW STD Ass'y XXH	2A12265	STD	-35	110	15,000
2" 1502 BW STD Ass'y XXH	2A14925	H2S	-35	176	10,000
2" 1502 BW DET Ass'y XXH	2A10224	STD	-35	110	15,000

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Description	Part No.	Service	Temp °C		Max
2" 1502 BWDET Ass'y XXH	2A14928	H2S	-35	176	10,000
2" 15K Safety Iron BW Sub	2P25455	STD	-30	110	15,000
3" 1002 BW STD Sch 160	2A10047	STD	-35	110	10,000
3" 1002 BW DET sch 160	2A10241	STD	-35	110	10,000
3" 1002 Integral	---	STD	-30	110	10,000
3"1502 P.S. Union	2A10252	STD	-35	110	15,000
3" 1502 NPS Union	2A10264	STD	-35	110	15,000
3" 1502 NPS Union	2A14366	H2S	-35	176	10,000
3" 1502 Integral	---	STD	-30	110	15,000
3" 1502 Integral	---	H2S	-30	176	10,000
3" 1502 B.W. STD Ass'y 2.56 I.D.	3A20879	STD	-35	110	15,000
3" 1502 B.W. STD Ass'y 2.56 I.D.	2A21141	H2S	-35	176	10,000
3" 1502 B. W. STD Ass'y XXH	2A12267	STD	-35	110	15,000
3" 1502 B.W. STD Ass'y XXH	2A14621	H2S	-35	176	10,000
3" 1502 B.W. DET Ass'y XXH	2A10253	STD	-35	110	15,000
3" 1502 B.W. DET Ass'y XXH	2A21153	H2S	-35	176	10,000
3" 2002 Female BW	2P25098	STD	-35	110	20,000
3" 2002 Male BW	2P25105	STD	-35	110	20,000
3" 15K Safety Iron BW Sub	2P25456	STD	-30	110	15,000
4" 1502 BW Std.	2A20401	STD	-30	110	15,000
4" 1502 BW Std. XXH	2A23407	STD	-30	110	15,000
4" 1502 BW Std. XXH	2A23219	H2S	-30	176	10,000
4" 1502 Female BW	2P16719	STD	-30	110	15,000
4" 1502 Female BW 3.75 ID	2P25096	STD	-30	110	15,000
4" 1502 Female BW Sch XXH	2P23406	STD	-30	110	15,000
4" 1502 Female BW NPS 4.5 LCT	2P24574	STD	-30	110	15,000
4" 1502 Female BW NPS 5 LCT	2P24484	STD	-30	110	15,000
4" 1502 Male BW 3.75 ID	2P25097	STD	-30	110	15,000
4" 1502 Male BW STD	2P20400	STD	-30	110	15,000
4" 1502 Male BW STD XXH	2P23405	STD	-30	110	15,000
4" 1502 Male BW STD XXH	2P23217	H2S	-30	176	10,000
4" 1502 Male BW NPS 4.5 LCT	2P24575	STD	-30	110	15,000
4" 1502 Male BW NPS 5 LCT	2P24483	STD	-30	110	15,000
4" 1502 Male BW x 4 LPTF	3P19188	STD	-30	110	15,000
4" 15K Safety Iron BW Sub	2P25010	STD	-30	110	15,000
2" 1502 Male Bull Plug Ass'y	3A20349	STD	-30	110	15,000
2" 1502 Male Bull Plug Ass'y	3A20314	H2S	-30	176	10,000
2" 1502 Female Bull Plug	3P18786	STD	-30	110	15,000
2" 1502 Female Bull Plug	3P13262	H2S	-30	176	10,000
2" 1502 Male Gage Plug Ass'y	3A21291	STD	-30	110	15,000
2" 1502 Male Gage Plug Ass'y	3A21152	H2S	-30	176	10,000
2" 1502 Female Gage Plug	3P18897	STD	-30	110	15,000
2" 1502 Female Gage Plug	3P20212	STD	-30	110	15,000
2" 1502 Female Gage Plug	3P20241	H2S	-30	176	10,000
2" 2202 Male Bull Plug Ass'y	2A25875	H2S	-30	176	15,000

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Description	Part No.	Service	Temp °C		Max
3" 1502 Male Bull Ass'y LT	3A20681	STD	-30	110	15,000
3" 1502 Male Bull Ass'y LT	3A20316	H2S	-30	176	10,000
3" 1502 Female Bull Plug	3P21148	STD	-30	110	15,000
3" 1502 Female Bull Plug	3P20589	H2S	-30	176	10,000
3" 1502 Male Gage Plug Ass'y	3A21316	STD	-30	110	15,000
3" 1502 Male Gage Plug Ass'y	3A20594	H2S	-30	176	10,000
3" 1002 Male Gage Plug Ass'y	3A22215	STD	0	110	10,000
3" 1502 Female Gage Plug	3P21318	STD	-30	110	15,000
3" 1502 Female Gage Plug	3P20591	H2S	-30	176	10,000
3" 2002 Female Gage Plug	2P24375	STD	-35	110	20,000
3" 2002 Male Bull Plug LT	3P11042LT	STD	-30	110	20,000
3" 15K Safety Iron Bull Plug Ass'y	2A28654	STD	-30	110	15,000
3" 30K Bull Plug Ass'y	2A30000	STD	-20	160	30,000
3" 30K Gauge Plug Ass'y	2A30318	STD	-20	160	30,000
3" 30K Gauge Plug Ass'y	2A36077	STD	-20	160	30,000
4" 1502 Male Bull Plug Assy.	3A20967	STD	-30	110	15,000
4" 1502 Female Bull Plug	2P22454	STD	-30	110	15,000
4" 1502 Male Bull Plug	2P16725	STD	-30	110	15,000
4" 1502 Male Bull Plug	2A33142	STD	-30	110	15,000
4" 1502 Male Bull Plug – Lifting	2P24706	STD	-30	110	15,000
4" 1502 Female Gage Plug	2P23216	H2S	-30	176	10,000
4" 25K Gauge Plug Ass'y, H2S	2A30410	H2S	-20	176	25,000
1 ½" 1502 Wing Nut	3P11452	STD.	-30	110	15,000
1" 1502 Wing Nut	3P11520	STD.	-30	110	15,000
1" 1502 Wing Nut-H2S	3P16550	H2S	-30	176	10,000
3" Fig. 1502 – EXL Wing Nut	2P41604	STD	-30	110	15,000

Safety Iron Clamp Assemblies

Description	Part No.	Service	Temp °C		Max
2" 15k Clamp Assembly	2A25404	STD	-30	110	15,000
2" 15k Clamp Assembly	2A25694	H2S	-30	176	15,000
2" 15k Clamp Assembly	2A28022	STD	-30	110	15,000
2" 15K Clamp Kit	2A25919	STD	-30	110	15,000
2" 20k Clamp Assembly	2A25406	STD	-30	110	20,000
2" 20k Clamp Assembly	2A25695	H2S	-30	176	20,000
3" 15K Clamp Kit	2A25917	STD	-30	110	15,000
3" 15k Clamp Assembly	2A25403	STD	-30	110	15,000
3" 15k Clamp Assembly	2A25696	H2S	-30	176	15,000
3" 15k Clamp Assembly	2A28024	STD	-30	110	15,000
3" 20k Clamp Assembly	2A25697	H2S	-30	176	20,000
3" 20k Clamp Assembly	2A25405	STD	-30	110	20,000
3" 30K Clamp Kit	2A29917	STD	-20	160	30,000
3" 30K Clamp Kit w/o Seals	2A29958	STD	-20	160	30,000
3" 30K Clamp Seal Kit	2A29959	STD	-20	160	30,000

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Description	Part No.	Service	Temp °C		Max
4" 15k Clamp Assembly	2A25402	STD	-30	110	15,000
4" 15k Clamp Assembly	2A25698	H2S	-30	176	15,000
4" 15k Clamp Assembly	2A28027	STD	-30	110	15,000
4" 25k Clamp Kit, H2S	2A30404	H2S	-20	176	25,000
4" 25k Clamp Kit w/o Seals, H2S	2A30405	H2S	-20	176	25,000
4" 25k Clamp Seal Kit, H2S	2A30406	H2S	-20	176	25,000
4" 15K Safety Iron x 4" 1502M	2A36254	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron	2A29401V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron	2A29402V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron	2A29403V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron	2A29404V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron	2A29405V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron	2A29406V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron	2A29407V	STD	-30	176	15,000
4" 1502 X 15K Safety Iron	2A28139	STD	-30	110	15,000
4" 1502 X 15K Safety Iron	2A28139V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron	2A29401BH	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron	2A29402BH	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron	2A29403BH	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron	2A29404BH	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron	2A29406BH	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron	2A29407BH	STD	-30	110	15,000
4" 15K Safety Iron x 3" 1502M	2A28136	STD	-30	110	15,000
4" 15K Safety Iron x 3" 1502M	2A28136V	STD	-30	176	15,000
4" 15K Safety Iron x 4" 1502F	2A28138	STD	-30	110	15,000
4" 15K Safety Iron x 4" 1502F	2A28138V	STD	-30	176	15,000
4" 15K Safety Iron x 3" 1502F	2A28156	STD	-30	110	15,000
4" 15K Safety Iron x 3" 1502F	2A28156V	STD	-30	176	15,000
4" 15K Safety Iron x 4" 1002F	2A28157	STD	-30	110	15,000
4" 15K Safety Iron x 4" 1002F	2A28157V	STD	-30	176	10,000
4" 15K Safety Iron x 2" 1502F	2A28158	STD	-30	110	10,000
4" 15K Safety Iron x 2" 1502F	2A28158V	STD	-30	176	15,000
4" 15K Safety Iron x 4" 1002M	2A28159	STD	-30	110	15,000
4" 15K Safety Iron x 4" 1002M	2A28159V	STD	-30	176	10,000
4" 15K Safety Iron x 2" 1502M	2A28160	STD	-30	110	10,000
4" 15K Safety Iron x 2" 1502M	2A28160V	STD	-30	176	15,000
3" 15K Safety Iron x 15K Safety Iron x 48	2A29396BH	STD	0	110	15,000
3" 15K Safety Iron x 15K Safety Iron x 120	2A29397BH	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron x 120	2A28902V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 108	2A28690V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 48	2A28831V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 36	2A28575V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 24	2A28167V	STD	-30	176	15,000

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<u>Description</u>	<u>Part No.</u>	<u>Service</u>	<u>Temp °C</u>		<u>Max</u>
4" 15K Safety Iron x 15K Safety Iron x 42	2A30373V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 44.84	2A36171V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 44.84	2P36170	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron x 94	2A36092V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 94	2P36091	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron x 58.2	2A36094V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 58.2	2P36093	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron x 41	2A36096V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 41	2P36095	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron x 62.13	2A36098V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 62.13	2P36097	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron x 111.4	2A36173V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 111.4	2P36172	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron x 118	2A36102V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 118	2P36101	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron x 110	2A36104V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 110	2P36103	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron x 109.13	2A36106V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 109.13	2P36105	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron x 70.4	2A36108V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 70.4	2P36107	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron x 72.54	2A36110V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 72.54	2P36109	STD	-30	110	15,000
4" 15K Safety Iron x 15K Safety Iron x 99	2A36175V	STD	-30	176	15,000
4" 15K Safety Iron x 15K Safety Iron x 99	2P36174	STD	-30	110	15,000
4" 15K Safety Iron x 4" 1502F x7.0	2A36112V	STD	-30	176	15,000
4" 15K Safety Iron x 3" 1502F x 7.0	2A36114V	STD	-30	176	15,000
3" 1502F x 3" 1502F x 32.6	2A36120V	STD	-30	176	15,000
3" 1502M x 3" 1502F x 32.63	2P36119	STD	-30	110	15,000
3" 1502F x 3" 1502M x 38.25	2A36122V	STD	-30	176	15,000
3" 1502M x 3" 1502F x 38.25	2P36121	STD	-30	110	15,000
3" 1502F x 3" 1502M x 8.25	2A36124V	STD	-30	176	15,000
3" 1502M x 3" 1502F x 8.25	2P36123	STD	-30	110	15,000
2" 1502F x 2" 1502M x 6.0	2A36126V	STD	-30	176	15,000
2" 1502M x 2" 1502F x 6.0	2P36125	STD	-30	110	15,000
3" 15K Safety Iron x 15K Safety Iron x 36	2A36254V	STD	-30	176	15,000
3" 15K Safety Iron x 15K Safety Iron x 36	2P36253	STD	-30	110	15,000
3" 15K Safety Iron x 15K Safety Iron x 24	2A36252V	STD	-30	176	15,000
3" 15K Safety Iron x 15K Safety Iron x 24	2P36251	STD	-30	110	15,000

Type Approval documentation



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2A39462V	2A39462V	
2A39464	2A39464	IR
2A39464V	2A39464V	IR
2P36228	2P36228	A
2P36229	2P36229	IR
2P36342	2P36342	IR
2P39461	2P39461	IR
2P39463	2P39463	IR
3P23825	2L18552	R7
3P23860	2L19751	R7
2A40094	2A40094	IR
3A21058	2L25082	R2
2A27034	2L25082	R2
2P42241	2P42241	IR
2P40714	2P40714	B

Note: Other part numbers or updated revisions may be acceptable under this Certificate, provided that the critical aspects of the design remain the same. Changes shall be documented and approved (via Engineering Change Notice or similar) by the Manufacturer's Engineering and/or Quality department as appropriate. DNV GL's local surveyor shall verify the change before issuance of Product Certificate.



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Fabrication Procedures

Procedures related to testing, welding, NDT, etc. are to be reviewed/approved by DNV GL's local surveyor.

Tests carried out

Prototype testing is not required for this certificate renewal.

Marking of product

Product marking shall:

- Be reviewed and approved by the DNV GL local surveyor
- Identify and differentiate each production unit
- Establish traceability to product design and fabrication documentation

Certificate Retention Survey

For retention of the Type Approval, DNV GL's surveyor shall perform a survey every second year in accordance with Standard for Certification No. 1.2, Section 4.

Additional Approved Manufacturing Location

Weir Engineering Services Co
Jebel Ali South Facility



Job Id:
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Plot No. S51303
Jebel Ali Free zone
Dubai
United Arab Emirates

Other conditions/comments

- The rated pressure capability of this equipment may be reduced by external loads and/or moments.
- Equipment must be regularly inspected for minimum wall thickness in accordance with "SPM Product Safety Guide" and drawings 1S19644 & 1S23257, latest revision.
- Reference DNV GL Project No. PP128078-05.

END OF CERTIFICATE