

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Pipe Fitting**

with type designation(s)

1" 15K standard service fitting, 2" 15K standard service fitting, 3" 15K standard service fitting, 4" 15K standard service fitting

Issued to

**Red Deer Ironworks Inc.
Red Deer, AB, Canada**

is found to comply with

DNVGL-OS-E101 – Drilling facilities, Edition January 2018**DNVGL-SI-0166 – Verification for compliance with Norwegian shelf regulations, Edition July 2018****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Houston** on **2019-12-10**for **DNV GL**This Certificate is valid until **2024-03-27**.DNV GL local station: **Vancouver**Approval Engineer: **Srujanbabu Sridharala**

**Meindert van Mierlo
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: **262.1-030625-2**
Certificate No: **TAD0000134**
Revision No: **1**

Product description

- 1", 2", 3", & 4" Fittings Integral, Fig 1502 15,000 psi Standard Services

Reference standards

- API 6A, Wellhead and Christmas Tree Equipment, 20th Edition

Application/Limitation

- Max. Working Pressure: 15,000 psi
- Test Pressure: 22,500 psi
- Design Temperature: -20 °F to 250 °F
- Service: Standard
- Material Class: AA
- Product Specification Level: 1
- Performance Requirement: 1

Type Approval documentation

Drawings:

Drawing No.	Rev.	Description
CR215FFFM.5625TSTD-A001	2	CROSS - 2in FIG 1502 FxFxFxM 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR215FFFM.5625TSTD-P001	1	CROSS - 2in FIG 1502 FxFxFxM 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR215FFFM5X7.5625TSTD-A001	3	CROSS - 2in FIG 1502 FxFxFxM 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR215FFFM5X7.5625TSTD-P001	2	CROSS - 2in FIG 1502 FxFxFxM 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR215FFFM5X7STD-A001	4	CROSS - 2in FIG 1502 FxFxFxM 5X7 SERIES STANDARD SERVICE
CR215FFFM5X7STD-P001	3	CROSS - 2in FIG 1502 FxFxFxM 5X7 SERIES STANDARD SERVICE
CR215FFFMSTD-A001	2	CROSS - 2in FIG 1502 FxFxFxM STANDARD SERVICE
CR215FFFMSTD-P001	1	CROSS - 2in FIG 1502 FxFxFxM STANDARD SERVICE
CR215MMMF.5625TSTD-A001	4	CROSS - 2in FIG 1502 MxMxMxF 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR215MMMF.5625TSTD-P001	4	CROSS - 2in FIG 1502 MxMxMxF 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR215MMMF5X7.5625TSTD-A001	3	CROSS - 2in FIG 1502 MxMxMxF 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR215MMMF5X7.5625TSTD-P001	2	CROSS - 2in FIG 1502 MxMxMxF 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR215MMMF5X7STD-A001	4	CROSS - 2in FIG 1502 MxMxMxF 5X7 SERIES STANDARD SERVICE

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Drawing No.	Rev.	Description
CR215MMMF5X7STD-P001	3	CROSS - 2in FIG 1502 MxMxMxF 5X7 SERIES STANDARD SERVICE
CR215MMMFSTD-A001	2	CROSS - 2in FIG 1502 MxMxMxF STANDARD SERVICE
CR215MMMFSTD-P001	1	CROSS - 2in FIG 1502 MxMxMxF STANDARD SERVICE
CR315FFFM.5625TSTD-A001	3	CROSS - 3in FIG 1502 FxFxFxM 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR315FFFM.5625TSTD-P001	2	CROSS - 3in FIG 1502 FxFxFxM 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR315FFFMSTD-A001	4	CROSS - 3in FIG 1502 FxFxFxM STANDARD SERVICE
CR315FFFMSTD-P001	3	CROSS - 3in FIG 1502 FxFxFxM STANDARD SERVICE
CR315MMMF.5625TSTD-A001	3	CROSS - 3in FIG 1502 MxMxMxF 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR315MMMF.5625TSTD-P001	3	CROSS - 3in FIG 1502 MxMxMxF 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR315MMMFSTD-A001	4	CROSS - 3in FIG 1502 MxMxMxF STANDARD SERVICE
CR315MMMFSTD-P001	3	CROSS - 3in FIG 1502 MxMxMxF STANDARD SERVICE
FLX215215FSTD-A001	5	FLANGE ADAPTOR - 2.0625in 15K (BX-152) x 2in FIG 1502 F INTEGRAL 15,000psi STANDARD SERVICE
FLX215215FSTD-P001	5	FLANGE ADAPTOR - 2.0625in 15K (BX-152) x 2in FIG 1502 F INTEGRAL 15,000psi STANDARD SERVICE
FLX215215MSTD-A001	4	FLANGE ADAPTOR - 2.0625in 15K (BX-152) x 2in FIG 1502 M INTEGRAL 15,000psi STANDARD SERVICE
FLX215215MSTD-P001	4	FLANGE ADAPTOR - 2.0625in 15K (BX-152) x 2in FIG 1502 M INTEGRAL 15,000psi STANDARD SERVICE
FLX315315FSTD-A001	4	FLANGE ADAPTOR - 3.0625in 15K (BX-154) x 3in FIG 1502 F INTEGRAL 15,000psi STANDARD SERVICE
FLX315315FSTD-P001	3	FLANGE ADAPTOR - 3.0625in 15K (BX-154) x 3in FIG 1502 F INTEGRAL 15,000psi STANDARD SERVICE
FLX315315MSTD-A001	3	FLANGE ADAPTOR - 3.0625in 15K (BX-154) x 3in FIG 1502 M INTEGRAL 15,000psi STANDARD SERVICE
FLX315315MSTD-P001	4	FLANGE ADAPTOR - 3.0625in 15K (BX-154) x 3in FIG 1502 M INTEGRAL 15,000psi STANDARD SERVICE
FLX415415FSTD-A001	1	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 4in FIG 1502 F INTEGRAL 15,000psi STANDARD SERVICE
FLX415415FSTD-P001	1	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 4in FIG 1502 F INTEGRAL 15,000psi STANDARD SERVICE
FLX415415MSTD-A001	1	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 4in FIG 1502 M INTEGRAL 15,000psi STANDARD SERVICE
FLX415415MSTD-P001	1	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 4in FIG 1502 M INTEGRAL 15,000psi STANDARD SERVICE
FT215FMSTD-A001	5	CUSHION TEE - 2in FIG 1502 MxF STANDARD SERVICE
FT215FMSTD-P001	5	CUSHION TEE - 2in FIG 1502 MxF STANDARD SERVICE
FT315FMSTD-A001	4	CUSHION TEE - 3in FIG 1502 MxF STANDARD SERVICE

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Drawing No.	Rev.	Description
FT315FMSTD-P001	5	CUSHION TEE - 3in FIG 1502 MxF STANDARD SERVICE
IXO315F215FSTD-A001	2	CROSSOVER BLOWDOWN - 3in FIG 1502 F x 2in FIG 1502 F STANDARD SERVICE
IXO315F215FSTD-P001	1	CROSSOVER BLOWDOWN - 3in FIG 1502 F x 2in FIG 1502 F STANDARD SERVICE
IXO315F215MSTD-A001	4	CROSSOVER BLOWDOWN - 3in FIG 1502 F x 2in FIG 1502 M STANDARD SERVICE
IXO315F215MSTD-P001	3	CROSSOVER BLOWDOWN - 3in FIG 1502 F x 2in FIG 1502 M STANDARD SERVICE
IXO415F215MBDSTD-A001	2	CROSSOVER BLOWDOWN - 4in FIG 1502 F x 2in FIG 1502 M STANDARD SERVICE
IXO415F215MBDSTD-P001	2	CROSSOVER BLOWDOWN - 4in FIG 1502 F x 2in FIG 1502 M STANDARD SERVICE
IXO415F315MBDSTD-A001	3	CROSSOVER BLOWDOWN - 4in FIG 1502 F x 3in FIG 1502 M STANDARD SERVICE
IXO415F315MBDSTD-P001	3	CROSSOVER BLOWDOWN - 4in FIG 1502 F x 3in FIG 1502 M STANDARD SERVICE
T115MFFSTD-A001	2	TEE - 1in FIG 1502 MxFxF STANDARD SERVICE
T115MFFSTD-P001	2	TEE - 1in FIG 1502 MxFxF STANDARD SERVICE
T115MFMSTD-A001	1	TEE - 1in FIG 1502 MxFxM STANDARD SERVICE
T115MFMSTD-P001	1	TEE - 1in FIG 1502 MxFxM STANDARD SERVICE
T215FFM5X7.5625TSTD-A001	3	TEE - 2in FIG 1502 FxFxM 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
T215FFM5X7.5625TSTD-P001	2	TEE - 2in FIG 1502 FxFxM 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
T215FFM5X7STD-A001	4	TEE - 2in FIG 1502 FxFxM 5X7 SERIES STANDARD SERVICE
T215FFM5X7STD-P001	3	TEE - 2in FIG 1502 FxFxM 5X7 SERIES STANDARD SERVICE
T215FFMSTD-A001	3	TEE - 2in FIG 1502 FxFxM STANDARD SERVICE
T215FFMSTD-P001	4	TEE - 2in FIG 1502 FxFxM STANDARD SERVICE
T215MFF5X7.5625TSTD-A001	4	TEE - 2in FIG 1502 MxFxF 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
T215MFF5X7.5625TSTD-P001	4	TEE - 2in FIG 1502 MxFxF 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
T215MFF5X7STD-A001	4	TEE - 2in FIG 1502 MxFxF 5X7 SERIES STANDARD SERVICE
T215MFF5X7STD-P001	3	TEE - 2in FIG 1502 MxFxF 5X7 SERIES STANDARD SERVICE
T215MFFSTD-A001	4	TEE - 2in FIG 1502 MxFxF STANDARD SERVICE
T215MFFSTD-P001	4	TEE - 2in FIG 1502 MxFxF STANDARD SERVICE
T215MFM5X7.5625TSTD-A001	3	TEE - 2in FIG 1502 MxFxM 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE

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T215MFM5X7.5625TSTD-P001	2	TEE - 2in FIG 1502 MxFxM 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
T215MFM5X7STD-A001	4	TEE - 2in FIG 1502 MxFxM 5X7 SERIES STANDARD SERVICE
T215MFM5X7STD-P001	3	TEE - 2in FIG 1502 MxFxM 5X7 SERIES STANDARD SERVICE
T215MFMSTD-A001	5	TEE - 2in FIG 1502 MxFxM STANDARD SERVICE
T215MFMSTD-P001	5	TEE - 2in FIG 1502 MxFxM STANDARD SERVICE
T215MMF5X7.5625TSTD-A001	2	TEE - 2in FIG 1502 MxMxF 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
T215MMF5X7.5625TSTD-P001	1	TEE - 2in FIG 1502 MxMxF 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
T215MMF5X7STD-A001	4	TEE - 2in FIG 1502 MxMxF 5X7 SERIES STANDARD SERVICE
T215MMF5X7STD-P001	3	TEE - 2in FIG 1502 MxMxF 5X7 SERIES STANDARD SERVICE
T215MMFSTD-A001	3	TEE - 2in FIG 1502 MxMxF STANDARD SERVICE
T215MMFSTD-P001	4	TEE - 2in FIG 1502 MxMxF STANDARD SERVICE
T315FFMSTD-A001	3	TEE - 3in FIG 1502 FxFxM STANDARD SERVICE
T315FFMSTD-P001	3	TEE - 3in FIG 1502 FxFxM STANDARD SERVICE
T315FFMX17STD-A001	2	TEE - 3in FIG 1502 FxFxM x17 STANDARD SERVICE
T315FFMX17STD-P001	1	TEE - 3in FIG 1502 FxFxM x17 STANDARD SERVICE
T315MFFSTD-A001	7	TEE - 3in FIG 1502 MxFxF STANDARD SERVICE
T315MFFSTD-P001	7	TEE - 3in FIG 1502 MxFxF STANDARD SERVICE
T315MFFX17STD-A001	3	TEE - 3in FIG 1502 MxFxF x17 STANDARD SERVICE
T315MFFX17STD-P001	2	TEE - 3in FIG 1502 MxFxF x17 STANDARD SERVICE
T315MFMSTD-A001	3	TEE - 3in FIG 1502 MxFxM STANDARD SERVICE
T315MFMSTD-P001	3	TEE - 3in FIG 1502 MxFxM STANDARD SERVICE
T315MMFSTD-A001	5	TEE - 3in FIG 1502 MxMxF STANDARD SERVICE
T315MMFSTD-P001	6	TEE - 3in FIG 1502 MxMxF STANDARD SERVICE
T315MMFX17STD-A001	2	TEE - 3in FIG 1502 MxMxF x17 STANDARD SERVICE
T315MMFX17STD-P001	1	TEE - 3in FIG 1502 MxMxF x17 STANDARD SERVICE
T415MFFSTD-A001	3	TEE - 4in FIG 1502 MxFxF STANDARD SERVICE
T415MFFSTD-P001	2	TEE - 4in FIG 1502 MxFxF STANDARD SERVICE
T415MFMSTD-A001	3	TEE - 4in FIG 1502 MxFxM STANDARD SERVICE
T415MFMSTD-P001	2	TEE - 4in FIG 1502 MxFxM STANDARD SERVICE
WKNIT11502STD-A001	2	WINGNUT KIT - 1in FIG 1502 STANDARD SERVICE
WKNIT21502STD-A001	3	WINGNUT KIT - 2in FIG 1502 STANDARD SERVICE
WKNIT31502STD-A001	5	WINGNUT KIT - 3in FIG 1502 STANDARD SERVICE
WKNIT41502STD-A001	4	WINGNUT KIT - 4in FIG 1502 STANDARD SERVICE
TH-0.5625in-AC-HP-F562C	2	THREAD - 0.5625in AUTO-CLAVE HIGH PRESSURE (F5625C)
TH-1in-1502-F	3	THREAD - 1in 1502 FEMALE

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Drawing No.	Rev.	Description
TH-1in-1502-M	3	THREAD - 1in 1502 MALE
TH-2in-1502-F	8	THREAD - 2in 1502 FEMALE
TH-2in-1502-M	7	THREAD - 2in 1502 MALE
TH-3in-1502-F	9	THREAD - 3in 1502 FEMALE
TH-3in-1502-M	11	THREAD - 3in 1502 MALE
TH-3in-1502-M-NS	11	THREAD - 3in 1502 MALE NON SEGMENTED
TH-4in-1502-F	6	THREAD - 4in 1502 FEMALE
TH-4in-1502-M	8	THREAD - 4in 1502 MALE
SEG11502-P001	1	SEGMENT SET - 1in 1502
SEG21502-P001	7	SEGMENT SET - 2in 1502
SEG31502-P001	8	SEGMENT SET - 3in 1502
SEG415STD-P001	5	SEGMENT SET - 4in 1502 STANDARD SERVICE
WN11502-P001	3	WINGNUT - 1in FIG 1502
WN215DETSTD-P001	5	WINGNUT - 2in FIG 1502 STANDARD SERVICE
WN315DETSTD-P001	8	WINGNUT - 3in FIG 1502 STANDARD SERVICE
WN415DETSTD-P001	8	WINGNUT - 4in FIG 1502 STANDARD SERVICE
BC215F.5625TSTD-A001	5	BLANKING CAP - 2in FIG 1502 FEMALE 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
BC215F.5625TSTD-P001	5	BLANKING CAP - 2in FIG 1502 FEMALE 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
BC215FSTD-A001	4	SERVICE BLANKING CAP - 2in FIG 1502 FEMALE STANDARD
BC215FSTD-P001	3	SERVICE
BC215M.5625TSTD-A001	5	BLANKING CAP - 2in FIG 1502 MALE 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
BC215M.5625TSTD-P001	9	BLANKING CAP - 2in FIG 1502 MALE 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
BC215MSTD-A001	4	SERVICE BLANKING CAP - 2in FIG 1502 MALE STANDARD
BC215MSTD-P001	7	SERVICE
BC315F.5625TSTD-A001	4	BLANKING CAP - 3in FIG 1502 FEMALE 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
BC315F.5625TSTD-P001	4	BLANKING CAP - 3in FIG 1502 FEMALE 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
BC315FSTD-A001	5	SERVICE BLANKING CAP - 3in FIG 1502 FEMALE STANDARD
BC315FSTD-P001	4	SERVICE
BC315M.5625TSTD-A001	4	BLANKING CAP - 3in FIG 1502 MALE 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
BC315M.5625TSTD-P001	5	BLANKING CAP - 3in FIG 1502 MALE 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
BC315MSTD-A001	5	SERVICE BLANKING CAP - 3in FIG 1502 MALE STANDARD
BC315MSTD-P001	5	SERVICE
BC415F.5625TSTD-A001	4	BLANKING CAP - 4in FIG 1502 FEMALE 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
BC415F.5625TSTD-P001	3	BLANKING CAP - 4in FIG 1502 FEMALE 0.5625in HIGH

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Drawing No.	Rev.	Description
		PRESSURE AUTOCLAVE TAP STANDARD SERVICE
BC415FSTD-A001	3	BLANKING CAP - 4in FIG 1502 FEMALE STANDARD SERVICE
BC415FSTD-P001	2	BLANKING CAP - 4in FIG 1502 FEMALE STANDARD SERVICE
BC415M.5625TSTD-A001	3	BLANKING CAP - 4in FIG 1502 MALE 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
BC415M.5625TSTD-P001	3	BLANKING CAP - 4in FIG 1502 MALE 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
BC415MSTD-A001	2	BLANKING CAP - 4in FIG 1502 MALE STANDARD SERVICE
BC415MSTD-P001	2	BLANKING CAP - 4in FIG 1502 MALE STANDARD SERVICE
CR215FMFM5X7.5625TSTD-A001	4	CROSS - 2in FIG 1502 FxMxFxM 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR215FMFM5X7.5625TSTD-P001	3	CROSS - 2in FIG 1502 FxMxFxM 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR215FMFM5X7STD-A001	3	CROSS - 2in FIG 1502 FxMxFxM 5X7 SERIES STANDARD SERVICE
CR215FMFM5X7STD-P001	2	CROSS - 2in FIG 1502 FxMxFxM 5X7 SERIES STANDARD SERVICE
CR215MMFF.5625TSTD-A001	4	CROSS - 2in FIG 1502 MxMxFxF 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR215MMFF.5625TSTD-P001	3	CROSS - 2in FIG 1502 MxMxFxF 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR215MMFFSTD-A001	3	CROSS - 2in FIG 1502 MxMxFxF STANDARD SERVICE
CR215MMFFSTD-P001	2	CROSS - 2in FIG 1502 MxMxFxF STANDARD SERVICE
CR315FFMCSTD-A001	2	CROSS - 3in FIG 1502 FxFxMxC STANDARD SERVICE
CR315FFMCSTD-P001	2	CROSS - 3in FIG 1502 FxFxMxC STANDARD SERVICE
CR315FMCCSTD-A001	2	CROSS - 3in FIG 1502 FxMxCxC STANDARD SERVICE
CR315FMCCSTD-P001	2	CROSS - 3in FIG 1502 FxMxCxC STANDARD SERVICE
CR315MMF215F.5625TSTD-A001	2	CROSS - 3in FIG 1502 MxMxF x 2in FIG 1502 F 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR315MMF215F.5625TSTD-P001	2	CROSS - 3in FIG 1502 MxMxF x 2in FIG 1502 F 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR315MMFF.5625TSTD-A001	4	CROSS - 3in FIG 1502 MxMxFxF 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR315MMFF.5625TSTD-P001	3	CROSS - 3in FIG 1502 MxMxFxF 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
CR315MMFFSTD-A001	3	CROSS - 3in FIG 1502 MxMxFxF STANDARD SERVICE
CR315MMFFSTD-P001	2	CROSS - 3in FIG 1502 MxMxFxF STANDARD SERVICE
EL215MFSTD-A001	1	ELBOW BLOCK 90 - 2in FIG 1502 MxF STANDARD SERVICE
EL215MFSTD-P001	1	ELBOW BLOCK 90 - 2in FIG 1502 MxF STANDARD SERVICE
EL315FM4STD-A001	1	ELBOW BLOCK 90 - 3in FIG 1502 MxF FROM 4" TEE FORGING STANDARD SERVICE
EL315FM4STD-P001	1	ELBOW BLOCK 90 - 3in FIG 1502 MxF FROM 4" TEE FORGING STANDARD SERVICE
FLX1131615215FSTD-A001	3	FLANGE ADAPTOR - 1.8125in 15K (BX-151) x 2in FIG 1502 F INTEGRAL 15,000psi STANDARD SERVICE
FLX1131615215FSTD-P001	5	FLANGE ADAPTOR - 1.8125in 15K (BX-151) x 2in FIG 1502 F INTEGRAL 15,000psi STANDARD SERVICE

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Drawing No.	Rev.	Description
FLX1131615215MSTD-A001	4	FLANGE ADAPTOR - 1.8125in 15K (BX-151) x 2in FIG 1502 M INTEGRAL 15,000psi STANDARD SERVICE
FLX1131615215MSTD-P001	5	FLANGE ADAPTOR - 1.8125in 15K (BX-151) x 2in FIG 1502 M INTEGRAL 15,000psi STANDARD SERVICE
FLX315215FSTD-A001	4	FLANGE ADAPTOR - 3.0625in 15K (BX-154) x 2in FIG 1502 F INTEGRAL 15,000psi STANDARD SERVICE
FLX315215FSTD-P001	5	FLANGE ADAPTOR - 3.0625in 15K (BX-154) x 2in FIG 1502 F INTEGRAL 15,000psi STANDARD SERVICE
FLX315215MSTD-A001	3	FLANGE ADAPTOR - 3.0625in 15K (BX-154) x 2in FIG 1502 M INTEGRAL 15,000psi STANDARD SERVICE
FLX315215MSTD-P001	4	FLANGE ADAPTOR - 3.0625in 15K (BX-154) x 2in FIG 1502 M INTEGRAL 15,000psi STANDARD SERVICE
FLX415215FSTD-A001	4	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 2in FIG 1502 F INTEGRAL 15,000psi STANDARD SERVICE
FLX415215FSTD-P001	5	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 2in FIG 1502 F INTEGRAL 15,000psi STANDARD SERVICE
FLX415215MSTD-A001	4	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 2in FIG 1502 M INTEGRAL 15,000psi STANDARD SERVICE
FLX415215MSTD-P001	5	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 2in FIG 1502 M INTEGRAL 15,000psi STANDARD SERVICE
FLX415315FSTD-A001	4	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 3in FIG 1502 F INTEGRAL 15,000psi STANDARD SERVICE
FLX415315FSTD-P001	5	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 3in FIG 1502 F INTEGRAL 15,000psi STANDARD SERVICE
FLX415315MSTD-A001	4	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 3in FIG 1502 M INTEGRAL 15,000psi STANDARD SERVICE
FLX415315MSTD-P001	5	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 3in FIG 1502 M INTEGRAL 15,000psi STANDARD SERVICE
FT215FMBKSTD-A001	2	BLOCK 90 - 2in FIG 1502 MxF STANDARD SERVICE
FT215FMBKSTD-P001	2	BLOCK 90 - 2in FIG 1502 MxF STANDARD SERVICE
IXO215FFSTD-A001	3	CROSSOVER - 2in FIG 1502 FxF STANDARD SERVICE
IXO215FFSTD-P001	3	CROSSOVER - 2in FIG 1502 FxF STANDARD SERVICE
IXO215M415MSTD-A001	2	CROSSOVER - 2in FIG 1502 M x 4in FIG 1502 M STANDARD SERVICE
IXO215M415MSTD-P001	3	CROSSOVER - 2in FIG 1502 M x 4in FIG 1502 M STANDARD SERVICE
IXO215MMSTD-A001	2	CROSSOVER - 2in FIG 1502 MxM STANDARD SERVICE
IXO215MMSTD-P001	4	CROSSOVER - 2in FIG 1502 MxM STANDARD SERVICE
IXO215MMX30.00INSTD-A001	1	CROSSOVER - 2in FIG 1502 MxM x 30.00in LONG STANDARD SERVICE
IXO215MMX30.00INSTD-P001	1	CROSSOVER - 2in FIG 1502 MxM x 30.00in LONG STANDARD SERVICE
IXO315F215MX11.18INSTD-A001	1	CROSSOVER - 3in FIG 1502 F x 2in FIG 1502 M x 11.18in LONG STANDARD SERVICE
IXO315F215MX11.18INSTD-P001	1	CROSSOVER - 3in FIG 1502 F x 2in FIG 1502 M x 11.18in LONG STANDARD SERVICE
IXO315F215MX9.37INSTD-A001	2	CROSSOVER - 3in FIG 1502 F x 2in FIG 1502 M x 9.37in LONG STANDARD SERVICE
IXO315F215MX9.37INSTD-P001	1	CROSSOVER - 3in FIG 1502 F x 2in FIG 1502 M x 9.37in LONG STANDARD SERVICE
IXO315FF10.24INSTD-A001	2	CROSSOVER - 3in FIG 1502 FxF x 10.24in LONG STANDARD SERVICE
IXO315FF10.24INSTD-P001	1	CROSSOVER - 3in FIG 1502 FxF x 10.24in LONG STANDARD SERVICE

Job Id: **262.1-030625-2**
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Drawing No.	Rev.	Description
IXO315FF15.83INSTD-A001	1	CROSSOVER - 3in FIG 1502 FxF x 15.83in LONG STANDARD SERVICE
IXO315FF15.83INSTD-P001	1	CROSSOVER - 3in FIG 1502 FxF x 15.83in LONG STANDARD SERVICE
IXO315FF31.75INSTD-A001	1	CROSSOVER - 3in FIG 1502 FxF x 31.75in LONG STANDARD SERVICE
IXO315FF31.75INSTD-P001	1	CROSSOVER - 3in FIG 1502 FxF x 31.75in LONG STANDARD SERVICE
IXO315FFSTD-A001	3	CROSSOVER - 3in FIG 1502 FxF STANDARD SERVICE
IXO315FFSTD-P001	3	CROSSOVER - 3in FIG 1502 FxF STANDARD SERVICE
IXO315M215FSTD-A001	4	CROSSOVER - 3in FIG 1502 M x 2in FIG 1502 F STANDARD SERVICE
IXO315M215FSTD-P001	3	CROSSOVER - 3in FIG 1502 M x 2in FIG 1502 F STANDARD SERVICE
IXO315M215MSTD-A001	2	CROSSOVER - 3in FIG 1502 M x 2in FIG 1502 M STANDARD SERVICE
IXO315M215MSTD-P001	2	CROSSOVER - 3in FIG 1502 M x 2in FIG 1502 M STANDARD SERVICE
IXO315MMSTD-A001	2	CROSSOVER - 3in FIG 1502 MxM STANDARD SERVICE
IXO315MMSTD-P001	3	CROSSOVER - 3in FIG 1502 MxM STANDARD SERVICE
IXO315MMX21.00INSTD-A001	2	CROSSOVER - 3in FIG 1502 MxM x 21.00in LONG STANDARD SERVICE
IXO315MMX21.00INSTD-P001	2	CROSSOVER - 3in FIG 1502 MxM x 21.00in LONG STANDARD SERVICE
IXO315MMX24.00INSTD-A001	1	CROSSOVER - 3in FIG 1502 MxM x 24.00in LONG STANDARD SERVICE
IXO315MMX24.00INSTD-P001	1	CROSSOVER - 3in FIG 1502 MxM x 24.00in LONG STANDARD SERVICE
IXO415F215FSTD-A001	2	CROSSOVER - 4in FIG 1502 F x 2in FIG 1502 F STANDARD SERVICE
IXO415F215FSTD-P001	1	CROSSOVER - 4in FIG 1502 F x 2in FIG 1502 F STANDARD SERVICE
IXO415F215MSTD-A001	2	CROSSOVER - 4in FIG 1502 F x 2in FIG 1502 M STANDARD SERVICE
IXO415F215MSTD-P001	1	CROSSOVER - 4in FIG 1502 F x 2in FIG 1502 M STANDARD SERVICE
IXO415F315FSTD-A001	2	CROSSOVER - 4in FIG 1502 F x 3in FIG 1502 F STANDARD SERVICE
IXO415F315FSTD-P001	1	CROSSOVER - 4in FIG 1502 F x 3in FIG 1502 F STANDARD SERVICE
IXO415F315MSTD-A001	3	CROSSOVER - 4in FIG 1502 F x 3in FIG 1502 M STANDARD SERVICE
IXO415F315MSTD-P001	2	CROSSOVER - 4in FIG 1502 F x 3in FIG 1502 M STANDARD SERVICE
IXO415FFSTD-A001	2	CROSSOVER - 4in FIG 1502 FxF STANDARD SERVICE
IXO415FFSTD-P001	1	CROSSOVER - 4in FIG 1502 FxF STANDARD SERVICE
IXO415M215FSTD-A001	2	CROSSOVER - 4in FIG 1502 M x 2in FIG 1502 F STANDARD SERVICE
IXO415M215FSTD-P001	1	CROSSOVER - 4in FIG 1502 M x 2in FIG 1502 F STANDARD SERVICE
IXO415M215MSTD-A001	1	CROSSOVER - 4in FIG 1502 M x 2in FIG 1502 M STANDARD SERVICE
IXO415M215MSTD-P001	1	CROSSOVER - 4in FIG 1502 M x 2in FIG 1502 M STANDARD SERVICE

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Drawing No.	Rev.	Description
IXO415M315FSTD-A001	3	CROSSOVER - 4in FIG 1502 M x 3in FIG 1502 F STANDARD SERVICE
IXO415M315FSTD-P001	2	CROSSOVER - 4in FIG 1502 M x 3in FIG 1502 F STANDARD SERVICE
IXO415M315MSTD-A001	2	CROSSOVER - 4in FIG 1502 M x 3in FIG 1502 M STANDARD SERVICE
IXO415M315MSTD-P001	2	CROSSOVER - 4in FIG 1502 M x 3in FIG 1502 M STANDARD SERVICE
T215FFF5X7.5625TSTD-A001	3	TEE - 2in FIG 1502 FxFxF 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
T215FFF5X7.5625TSTD-P001	2	TEE - 2in FIG 1502 FxFxF 5X7 SERIES 0.5625in HIGH PRESSURE AUTOCLAVE TAP STANDARD SERVICE
T215FFF5X7STD-A001	3	TEE - 2in FIG 1502 FxFxF 5X7 SERIES STANDARD SERVICE
T215FFF5X7STD-P001	2	TEE - 2in FIG 1502 FxFxF 5X7 SERIES STANDARD SERVICE
T215FFFSTD-A001	3	TEE - 2in FIG 1502 FxFxF STANDARD SERVICE
T215FFFSTD-P001	3	TEE - 2in FIG 1502 FxFxF STANDARD SERVICE
T215MF315FSTD-A001	1	TEE - 2in FIG 1502 MxF x 3in FIG 1502 F STANDARD SERVICE
T215MF315FSTD-P001	2	TEE - 2in FIG 1502 MxF x 3in FIG 1502 F STANDARD SERVICE
T215MF315MSTD-A001	1	TEE - 2in FIG 1502 MxF x 3in FIG 1502 M STANDARD SERVICE
T215MF315MSTD-P001	2	TEE - 2in FIG 1502 MxF x 3in FIG 1502 M STANDARD SERVICE
T215MMMSTD-A001	3	TEE - 2in FIG 1502 MxMxM STANDARD SERVICE
T215MMMSTD-P001	5	TEE - 2in FIG 1502 MxMxM STANDARD SERVICE
T315MF215FSTD-A001	8	TEE - 3in FIG 1502 MxF x 2in FIG 1502 F STANDARD SERVICE
T315MF215FSTD-P001	7	TEE - 3in FIG 1502 MxF x 2in FIG 1502 F STANDARD SERVICE
T315MF215FX12.63INSTD-A001	1	TEE - 3in FIG 1502 MxF x 2in FIG 1502 F x 12.63in LONG STANDARD SERVICE
T315MF215FX12.63INSTD-P001	1	TEE - 3in FIG 1502 MxF x 2in FIG 1502 F x 12.63in LONG STANDARD SERVICE
T315MF215MSTD-A001	1	TEE - 3in FIG 1502 MxF x 2in FIG 1502 M STANDARD SERVICE
T315MF215MSTD-P001	2	TEE - 3in FIG 1502 MxF x 2in FIG 1502 M STANDARD SERVICE
T315MF215MX14.50INSTD-A001	1	TEE - 3in FIG 1502 MxF x 2in FIG 1502 M x 14.50in LONG STANDARD SERVICE
T315MF215MX14.50INSTD-P001	1	TEE - 3in FIG 1502 MxF x 2in FIG 1502 M x 14.50in LONG STANDARD SERVICE
T315MFFX12.63INSTD-A001	1	TEE - 3in FIG 1502 MxFxF x 12.63in LONG STANDARD SERVICE
T315MFFX12.63INSTD-P001	1	TEE - 3in FIG 1502 MxFxF x 12.63in LONG STANDARD SERVICE
T315MFMX12.63INSTD-A001	1	TEE - 3in FIG 1502 MxFxM x 12.63in LONG STANDARD SERVICE
T315MFMX12.63INSTD-P001	1	TEE - 3in FIG 1502 MxFxM x 12.63in LONG STANDARD SERVICE
T315MFMX17STD-A001	2	TEE - 3in FIG 1502 MxFxM x17 STANDARD SERVICE
T315MFMX17STD-P001	1	TEE - 3in FIG 1502 MxFxM x17 STANDARD SERVICE

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Drawing No.	Rev.	Description
T315MMMSTD-A001	5	TEE - 3in FIG 1502 MxMxM STANDARD SERVICE
T315MMMSTD-P001	5	TEE - 3in FIG 1502 MxMxM STANDARD SERVICE
T315MMMx17STD-A001	1	TEE - 3in FIG 1502 MxMxM x17 STANDARD SERVICE
T315MMMx17STD-P001	1	TEE - 3in FIG 1502 MxMxM x17 STANDARD SERVICE
T415MF215FSTD-A001	2	TEE - 4in FIG 1502 MxF x 2in FIG 1502 F STANDARD SERVICE
T415MF215FSTD-P001	1	TEE - 4in FIG 1502 MxF x 2in FIG 1502 F STANDARD SERVICE
TH-2in-1502-M-NS-BC	5	THREAD - 2in 1502 MALE NON SEGMENTED BLANKING CAP
TH-3in-1502-M-NS-BC	8	THREAD - 3in 1502 MALE NON SEGMENTED BLANKING CAP
TH-4in-1502-M-NS	8	THREAD - 4in 1502 MALE NON SEGMENTED
TH-4in-1502-M-NS-BC	6	THREAD - 4in 1502 MALE NON SEGMENTED BLANKING CAP

Note: Other part numbers or updated revisions may be acceptable under this Certificate provided 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.

Calculations:

Document No.	Rev.	Description
QF0049	17	Min. Wall Thickness- sour & std service products
-	1/14/2013	API-CR215XXXX.5625TSTD-P001 - AutoclaveCalc
-	4/24/2014	API-CR215XXXX.5625TSTD-P001 - CrossBodyCalc
-	4/24/2014	API-CR215XXXX57.5625TSTD-P001 - CrossBodyCalc
-	3/14/2013	API-CR315XXXX.5625TSTD-P001 - AutoclaveCalc
-	4/24/2014	API-CR315XXXX.5625TSTD-P001 - CrossBodyCalc
-	11/23/2012	API-Cross Autoclave Minimum Wall Thickness - AutoclaveCalc
-	4/16/2013	API-FLXXX215XSTD-P001 - AdapterFlangeBodyCalc
-	4/15/2013	API-FLXXX315XSTD-P001 - AdapterFlangeBodyCalc
-	12/20/2018	API-FLXXX415XSTD-P001 - AdapterFlangeBodyCalc
-	2/01/2013	API-FT215FMSTD-P001 - FracTeeBodyCalc
-	2/01/2013	API-FT315FMSTD-P001 - FracTeeBodyCalc
-	4/10/2013	API-IXO215F215MSTD-P001 - MXF CrossOverBodyCalc
-	4/10/2013	API-IXO315F315MSTD-P001 - MXF CrossOverBodyCalc
-	4/10/2013	API-IXO415F415MSTD-P001 - MXF CrossOverBodyCalc
-	13/06/2014	API-T115XXXSTD-P001 - TeeBodyCalc
-	3/05/2015	API-T215XXX5X7.5625TSTD-P001 - AutoclaveCalc
-	1/11/2013	API-T215XXXSTD-P001 - TeeBodyCalc
-	1/11/2013	API-T315XXXSTD-P001 - TeeBodyCalc
-	1/11/2013	API-T415XXXSTD-P001 - TeeBodyCalc
-	06/13/2014	API-TH-1in-FIG-1502-F-STD-ThdFemaleMastercalc
-	06/13/2014	API-TH-1in-FIG-1502-M-STD-ThdMaleMastercalc
-	1/03/2013	API-TH-2in-1502-F-STD-ThdFemaleMastercalc

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Document No.	Rev.	Description
-	1/21/2013	TH-2in-1502-M-STD ThdMaleMastercalc
-	4/12/2013	API-TH-3in-1502-F-STD-ThdFemaleMastercalc
-	12/27/2012	TH-3in-1502-M-STD ThdMaleMastercalc
-	8/22/2013	API-TH-4in-1502-F-STD-ThdFemaleMastercalc
-	12/27/2012	TH-4in-1502-M-STD ThdMaleMastercalc
-	6/13/2014	API-SEG115STD-P001 - SegmentCalc
-	8/28/2013	API-SEG215STD-P001 - SegmentCalc
-	8/28/2013	API-SEG315STD-P001 - SegmentCalc
-	8/28/2013	API-SEG415STD-P001 - SegmentCalc
-	9/15/2014	API-WN115DETSTD-P001 - WingNutCalcs
-	8/28/2013	API-WN215DETSTD-P001 - WingNutCalcs
-	8/28/2013	API-WN315DETSTD-P001 - WingNutCalcs
-	8/28/2013	API-WN415DETSTD-P001 - WingNutCalcs
-	1/21/2013	API-TH-4IN-1502-NS-M-STD -Male Thread Calcs

Materials:

Part	Material Spec.	Description	Min. Yield	Req'd Charpy @ -20 °F
Body, Wing nut	MS-104 Rev.7	4130	100 ksi	20 ft-lbf
Flange	MS-105 Rev.7	4140/4145	100 ksi/110 ksi	20 ft-lbf
Non metallic seals	MS-107 Rev.2	-	-	-
Wing nut segment	MS-102 Rev.5	4140	80 ksi	20 ft-lbf

Note: (1) See material specifications for additional material requirements.

Tests carried out

1. Test report dated 2019-03-19 performed on fitting with serial number 41679-6.

Marking of product

For traceability the following marking is to be carried out on each product:

1. Serial No.
2. Manufacturer's name or trademark.
3. Additional Marking at manufacturer's discretion.

Periodical assessment

For retention of the Type Approval, DNV GL's surveyor shall perform periodical assessment after 2 years and after 3.5 years in accordance with DNV GL's Class Programme DNVGL-CP-0338, Section 4.

Other conditions/comments

1. Procedures related to testing, welding, NDT, and other quality control requirements are to be reviewed/approved by DNV GL's local surveyor.
2. DNV GL ref.: A0640768

END OF CERTIFICATE

TYPE APPROVAL CERTIFICATE**This is to certify:****That the Pipe Fitting**

with type designation(s)

2" 10K sour service fitting,, 3" 10K sour service fitting, &, 4" 10K sour service fitting

Issued to

Red Deer Ironworks Inc.**Red Deer, AB, Canada**

is found to comply with

DNVGL-OS-E101 – Drilling facilities, Edition January 2018**DNVGL-SI-0166 – Verification for compliance with Norwegian shelf regulations, Edition July 2018****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Houston** on **2019-12-10**for **DNV GL**This Certificate is valid until **2024-03-27**.DNV GL local station: **Vancouver**Approval Engineer: **Srujanbabu Sridharala****Meindert van Mierlo**
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: **262.1-030621-2**
Certificate No: **TAD0000135**
Revision No: **1**

Product description

- 2", 3", & 4" Fittings Integral, Fig 1502 10,000 psi Sour Services

Reference standards

- API 6A, Wellhead and Christmas Tree Equipment, 20th Edition
- NACE MR0175/ISO 15156, 'Petroleum and Natural Gas Industries – Materials for Use in H₂S – Containing Environments in Oil and Gas Production', 3rd Edition

Application/Limitation

- Max. Working Pressure: 10,000 psi
- Test Pressure: 15,000 psi
- Design Temperature: -50 °F to 250 °F
- Service: Sour (H₂S)
- Material Class: DD
- Product Specification Level: 1
- Performance Requirement: 1

Type Approval documentation

Drawings:

Drawing no	Revision	Description
CR215FFFM5X7-A001	2	CROSS - 2in FIG 1502 FxFxFxM 5X7 SERIES SOUR SERVICE
CR215FFFM5X7-P001	2	CROSS - 2in FIG 1502 FxFxFxM 5X7 SERIES SOUR SERVICE
CR215FFFM5X7T-A001	1	CROSS - 2in FIG 1502 FxFxFxM 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
CR215FFFM5X7T-P001	1	CROSS - 2in FIG 1502 FxFxFxM 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
CR215FFFM-A001	3	CROSS - 2in FIG 1502 FxFxFxM SOUR SERVICE
CR215FFFM-P001	4	CROSS - 2in FIG 1502 FxFxFxM SOUR SERVICE
CR215FFFM-T-A001	3	CROSS - 2in FIG 1502 FxFxFxM 0.50in NPT TAP SOUR SERVICE
CR215FFFM-T-P001	3	CROSS - 2in FIG 1502 FxFxFxM 0.50in NPT TAP SOUR SERVICE
CR215MMMF5X7-A001	2	CROSS - 2in FIG 1502 MxMxMxF 5X7 SERIES SOUR SERVICE
CR215MMMF5X7-P001	2	CROSS - 2in FIG 1502 MxMxMxF 5X7 SERIES SOUR SERVICE
CR215MMMF5X7T-A001	1	CROSS - 2in FIG 1502 MxMxMxF 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
CR215MMMF5X7T-P001	1	CROSS - 2in FIG 1502 MxMxMxF 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
CR215MMMF-A001	2	CROSS - 2in FIG 1502 MxMxMxF SOUR SERVICE
CR215MMMF-P001	4	CROSS - 2in FIG 1502 MxMxMxF SOUR SERVICE
CR215MMMF-T-A001	3	CROSS - 2in FIG 1502 MxMxMxF 0.50in NPT TAP SOUR SERVICE
CR215MMMF-T-P001	3	CROSS - 2in FIG 1502 MxMxMxF 0.50in NPT TAP SOUR SERVICE
CR315FFFM-T-A001	4	CROSS - 3in FIG 1502 FxFxFxM 0.50in NPT TAP SOUR SERVICE
CR315FFFM-T-P001	3	CROSS - 3in FIG 1502 FxFxFxM 0.50in NPT TAP SOUR SERVICE
CR315MMMF-T-A001	4	CROSS - 3in FIG 1502 MxMxMxF 0.50in NPT TAP SOUR SERVICE

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Drawing no	Revision	Description
CR315MMMFT-P001	3	CROSS - 3in FIG 1502 MxMxMxF 0.50in NPT TAP SOUR SERVICE
FLX210215F-A001	2	FLANGE ADAPTOR - 2.0625in 10K (BX-152) x 2in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX210215F-P001	4	FLANGE ADAPTOR - 2.0625in 10K (BX-152) x 2in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX210215M-A001	3	FLANGE ADAPTOR - 2.0625in 10K (BX-152) x 2in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX210215M-P001	4	FLANGE ADAPTOR - 2.0625in 10K (BX-152) x 2in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX310315F-A001	2	FLANGE ADAPTOR - 3.0625in 10K x 3in FIG 1502 F SOUR SERVICE
FLX310315F-P001	5	FLANGE ADAPTOR - 3.0625in 10K x 3in FIG 1502 F SOUR SERVICE
FLX310315M-A001	4	FLANGE ADAPTOR - 3.0625in 10K x 3in FIG 1502 M SOUR SERVICE
FLX310315M-P001	5	FLANGE ADAPTOR - 3.0625in 10K x 3in FIG 1502 M SOUR SERVICE
FLX410415F-A001	3	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 4in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX410415F-P001	4	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 4in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX410415M-A001	3	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 4in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX410415M-P001	4	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 4in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FT215FM-A001	4	CUSHION TEE - 2in FIG 1502 MxF SOUR SERVICE
FT215FM-P001	6	CUSHION TEE - 2in FIG 1502 MxF SOUR SERVICE
FT315FM-A001	4	CUSHION TEE - 3in FIG 1502 MxF SOUR SERVICE
FT315FM-P001	5	CUSHION TEE - 3in FIG 1502 MxF SOUR SERVICE
FT415FM-A001	3	CUSHION TEE - 4in FIG 1502 MxF SOUR SERVICE
FT415FM-P001	4	CUSHION TEE - 4in FIG 1502 MxF SOUR SERVICE
IXO315F215M-A001	4	CROSSOVER - 3in FIG 1502 F x 2in FIG 1502 M SOUR SERVICE
IXO315F215M-P001	5	CROSSOVER - 3in FIG 1502 F x 2in FIG 1502 M SOUR SERVICE
IXO315M215M-A001	2	CROSSOVER - 3in FIG 1502 M x 2in FIG 1502 M SOUR SERVICE
IXO315M215M-P001	5	CROSSOVER - 3in FIG 1502 M x 2in FIG 1502 M SOUR SERVICE
IXO415F215MBD-A001	4	CROSSOVER BLOWDOWN - 4in FIG 1502 F x 2in FIG 1502 M SOUR SERVICE
IXO415F215MBD-P001	4	CROSSOVER BLOWDOWN - 4in FIG 1502 F x 2in FIG 1502 M SOUR SERVICE
IXO415F315MBD-A001	5	CROSSOVER BLOWDOWN - 4in FIG 1502 F x 3in FIG 1502 M SOUR SERVICE

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Drawing no	Revision	Description
IXO415F315MBD-P001	5	CROSSOVER BLOWDOWN - 4in FIG 1502 F x 3in FIG 1502 M SOUR SERVICE
T215FFM5X7-A001	2	TEE - 2in FIG 1502 FxFxM 5X7 SERIES SOUR SERVICE
T215FFM5X7-P001	2	TEE - 2in FIG 1502 FxFxM 5X7 SERIES SOUR SERVICE
T215FFM5X7T-A001	2	TEE - 2in FIG 1502 FxFxM 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
T215FFM5X7T-P001	1	TEE - 2in FIG 1502 FxFxM 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
T215FFM-A001	2	TEE - 2in FIG 1502 FxFxM SOUR SERVICE
T215FFM-P001	4	TEE - 2in FIG 1502 FxFxM SOUR SERVICE
T215MFF5X7-A001	2	TEE - 2in FIG 1502 MxFxF 5X7 SERIES SOUR SERVICE
T215MFF5X7-P001	2	TEE - 2in FIG 1502 MxFxF 5X7 SERIES SOUR SERVICE
T215MFF5X7T-A001	2	TEE - 2in FIG 1502 MxFxF 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
T215MFF5X7T-P001	1	TEE - 2in FIG 1502 MxFxF 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
T215MFF-A001	2	TEE - 2in FIG 1502 MxFxF SOUR SERVICE
T215MFF-P001	4	TEE - 2in FIG 1502 MxFxF SOUR SERVICE
T215MFM5X7-A001	2	TEE - 2in FIG 1502 MxFxM 5X7 SERIES SOUR SERVICE
T215MFM5X7-P001	2	TEE - 2in FIG 1502 MxFxM 5X7 SERIES SOUR SERVICE
T215MFM5X7T-A001	2	TEE - 2in FIG 1502 MxFxM 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
T215MFM5X7T-P001	1	TEE - 2in FIG 1502 MxFxM 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
T215MFM-A001	2	TEE - 2in FIG 1502 MxFxM SOUR SERVICE
T215MFM-P001	4	TEE - 2in FIG 1502 MxFxM SOUR SERVICE
T215MMF5X7-A001	2	TEE - 2in FIG 1502 MxMxF 5X7 SERIES SOUR SERVICE
T215MMF5X7-P001	2	TEE - 2in FIG 1502 MxMxF 5X7 SERIES SOUR SERVICE
T215MMF5X7T-A001	2	TEE - 2in FIG 1502 MxMxF 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
T215MMF5X7T-P001	1	TEE - 2in FIG 1502 MxMxF 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
T215MMF-A001	2	TEE - 2in FIG 1502 MxMxF SOUR SERVICE
T215MMF-P001	3	TEE - 2in FIG 1502 MxMxF SOUR SERVICE
T315FFM-A001	2	TEE - 3in FIG 1502 FxFxM SOUR SERVICE
T315FFM-P001	2	TEE - 3in FIG 1502 FxFxM SOUR SERVICE
T315FFMX17-A001	1	TEE - 3in FIG 1502 FxFxM x17 SOUR SERVICE
T315FFMX17-P001	1	TEE - 3in FIG 1502 FxFxM x17 SOUR SERVICE
T315MFF-A001	2	TEE - 3in FIG 1502 MxFxF SOUR SERVICE
T315MFF-P001	3	TEE - 3in FIG 1502 MxFxF SOUR SERVICE
T315MFFX17-A001	2	TEE - 3in FIG 1502 MxFxF x17 SOUR SERVICE
T315MFFX17-P001	2	TEE - 3in FIG 1502 MxFxF x17 SOUR SERVICE
T315MFM-A001	2	TEE - 3in FIG 1502 MxFxM SOUR SERVICE

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Drawing no	Revision	Description
T315MFM-P001	3	TEE - 3in FIG 1502 MxFxM SOUR SERVICE
T315MFMX17-A001	1	TEE - 3in FIG 1502 MxFxM x17 SOUR SERVICE
T315MFMX17-P001	1	TEE - 3in FIG 1502 MxFxM x17 SOUR SERVICE
T315MMF-A001	2	TEE - 3in FIG 1502 MxMxF SOUR SERVICE
T315MMF-P001	3	TEE - 3in FIG 1502 MxMxF SOUR SERVICE
T315MMFX17-A001	1	TEE - 3in FIG 1502 MxMxF x17 SOUR SERVICE
T315MMFX17-P001	1	TEE - 3in FIG 1502 MxMxF x17 SOUR SERVICE
T415MFF-A001	2	TEE - 4in FIG 1502 MxFxF SOUR SERVICE
T415MFF-P001	3	TEE - 4in FIG 1502 MxFxF SOUR SERVICE
T415MFM-A001	2	TEE - 4in FIG 1502 MxFxM SOUR SERVICE
T415MFM-P001	3	TEE - 4in FIG 1502 MxFxM SOUR SERVICE
WNKIT21502-A001	3	WINGNUT KIT - 2in FIG 1502 SOUR SERVICE
WNKIT31502-A001	3	WINGNUT KIT - 3in FIG 1502 SOUR SERVICE
WNKIT41502-A001	4	WINGNUT KIT - 4in FIG 1502 SOUR SERVICE
TH-2in-1502-F	8	THREAD - 2in 1502 FEMALE
TH-2in-1502-M	7	THREAD - 2in 1502 MALE
TH-3in-1502-F	9	THREAD - 3in 1502 FEMALE
TH-3in-1502-M	11	THREAD - 3in 1502 MALE
TH-3in-1502-M-NS	11	THREAD - 3in 1502 MALE NON SEGMENTED
TH-4in-1502-F	6	THREAD - 4in 1502 FEMALE
TH-4in-1502-M	8	THREAD - 4in 1502 MALE
SEG21502-P001	7	SEGMENT SET - 2in 1502
SEG31502-P001	8	SEGMENT SET - 3in 1502
SEG41502-P001	7	SEGMENT SET - 4in 1502 SOUR SERVICE
WN21502-P001	7	WINGNUT - 2in FIG 1502 SOUR SERVICE
WN31502-P001	7	WINGNUT - 3in FIG 1502 SOUR SERVICE
WN415DET-P001	8	WINGNUT - 4in FIG 1502 SOUR SERVICE
BC215F-A001	4	BLANKING CAP - 2in FIG 1502 FEMALE SOUR SERVICE
BC215F-P001	5	BLANKING CAP - 2in FIG 1502 FEMALE SOUR SERVICE
BC215FT-A001	4	BLANKING CAP - 2in FIG 1502 FEMALE 0.5in NPT TAP SOUR SERVICE
BC215FT-P001	4	BLANKING CAP - 2in FIG 1502 FEMALE 0.5in NPT TAP SOUR SERVICE
BC215M-A001	4	BLANKING CAP - 2in FIG 1502 MALE SOUR SERVICE
BC215M-P001	8	BLANKING CAP - 2in FIG 1502 MALE SOUR SERVICE
BC215MT-A001	5	BLANKING CAP - 2in FIG 1502 MALE 0.5in NPT TAP SOUR SERVICE
BC215MT-P001	10	BLANKING CAP - 2in FIG 1502 MALE 0.5in NPT TAP SOUR SERVICE
BC315F-A001	4	BLANKING CAP - 3in FIG 1502 FEMALE SOUR SERVICE
BC315F-P001	4	BLANKING CAP - 3in FIG 1502 FEMALE SOUR SERVICE
BC315FT-A001	4	BLANKING CAP - 3in FIG 1502 FEMALE 0.5in NPT TAP SOUR SERVICE
BC315FT-P001	5	BLANKING CAP - 3in FIG 1502 FEMALE 0.5in NPT TAP SOUR SERVICE
BC315FTB-A001	1	BLANKING CAP - 3in FIG 1502 FEMALE 0.5in NPT TAP W/O

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Drawing no	Revision	Description
		POCKET SOUR SERVICE
BC315FTB-P001	1	BLANKING CAP - 3in FIG 1502 FEMALE 0.5in NPT TAP W/O POCKET SOUR SERVICE
BC315M-A001	4	BLANKING CAP - 3in FIG 1502 MALE SOUR SERVICE
BC315M-P001	4	BLANKING CAP - 3in FIG 1502 MALE SOUR SERVICE
BC315MT-A001	5	BLANKING CAP - 3in FIG 1502 MALE 0.5in NPT TAP SOUR SERVICE
BC315MT-P001	6	BLANKING CAP - 3in FIG 1502 MALE 0.5in NPT TAP SOUR SERVICE
BC415F-A001	3	BLANKING CAP - 4in FIG 1502 FEMALE SOUR SERVICE
BC415F-P001	3	BLANKING CAP - 4in FIG 1502 FEMALE SOUR SERVICE
BC415FT-A001	4	BLANKING CAP - 4in FIG 1502 FEMALE 0.5in NPT TAP SOUR SERVICE
BC415FT-P001	3	BLANKING CAP - 4in FIG 1502 FEMALE 0.5in NPT TAP SOUR SERVICE
BC415M-A001	3	BLANKING CAP - 4in FIG 1502 MALE SOUR SERVICE
BC415M-P001	3	BLANKING CAP - 4in FIG 1502 MALE SOUR SERVICE
BC415MT-A001	6	BLANKING CAP - 4in FIG 1502 MALE 0.5in NPT TAP SOUR SERVICE
BC415MT-P001	5	BLANKING CAP - 4in FIG 1502 MALE 0.5in NPT TAP SOUR SERVICE
CR215FFF315M-A001	2	CROSS - 2in FIG 1502 FxFxF x 3in FIG 1502 M SOUR SERVICE
CR215FFF315M-P001	3	CROSS - 2in FIG 1502 FxFxF x 3in FIG 1502 M SOUR SERVICE
CR215FFF315MT-A001	3	CROSS - 2in FIG 1502 FxFxF x 3in FIG 1502 M 0.50in NPT TAP SOUR SERVICE
CR215FFF315MT-P001	3	CROSS - 2in FIG 1502 FxFxF x 3in FIG 1502 M 0.50in NPT TAP SOUR SERVICE
CR215FMFM5X7-A001	2	CROSS - 2in FIG 1502 FxMxFxM 5X7 SERIES SOUR SERVICE
CR215FMFM5X7-P001	2	CROSS - 2in FIG 1502 FxMxFxM 5X7 SERIES SOUR SERVICE
CR215FMFM5X7T-A001	2	CROSS - 2in FIG 1502 FxMxFxM 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
CR215FMFM5X7T-P001	2	CROSS - 2in FIG 1502 FxMxFxM 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
CR215MMFF-A001	4	CROSS - 2in FIG 1502 MxMxFxF SOUR SERVICE
CR215MMFF-P001	4	CROSS - 2in FIG 1502 MxMxFxF SOUR SERVICE
CR215MMFFT-A001	2	CROSS - 2in FIG 1502 MxMxFxF 0.50in NPT TAP SOUR SERVICE
CR215MMFFT-P001	2	CROSS - 2in FIG 1502 MxMxFxF 0.50in NPT TAP SOUR SERVICE
CR315FFMC-A001	2	CROSS - 3in FIG 1502 FxFxMxC SOUR SERVICE
CR315FFMC-P001	2	CROSS - 3in FIG 1502 FxFxMxC SOUR SERVICE
CR315FMCC-A001	2	CROSS - 3in FIG 1502 FxMxCxC SOUR SERVICE
CR315FMCC-P001	2	CROSS - 3in FIG 1502 FxMxCxC SOUR SERVICE
CR315MMF215FT-A001	2	CROSS - 3in FIG 1502 MxMxF x 2in FIG 1502 F 0.50in NPT TAP SOUR SERVICE
CR315MMF215FT-P001	2	CROSS - 3in FIG 1502 MxMxF x 2in FIG 1502 F 0.50in NPT TAP SOUR SERVICE
CR315MMFFT-A001	3	CROSS - 3in FIG 1502 MxMxFxF 0.50in NPT TAP SOUR SERVICE
CR315MMFFT-P001	2	CROSS - 3in FIG 1502 MxMxFxF 0.50in NPT TAP SOUR SERVICE
EL215MF-A001	2	ELBOW BLOCK 90 - 2in FIG 1502 MxF SOUR SERVICE
EL215MF-P001	2	ELBOW BLOCK 90 - 2in FIG 1502 MxF SOUR SERVICE

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Drawing no	Revision	Description
EL315F215M-A001	2	ELBOW BLOCK 90 - 3in FIG 1502 F X 2in FIG 1502 M SOUR SERVICE
EL315F215M-P001	2	ELBOW BLOCK 90 - 3in FIG 1502 F X 2in FIG 1502 M SOUR SERVICE
FLX1131610215F-A001	2	FLANGE ADAPTOR - 1.8125in 10K (BX-151) x 2in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX1131610215F-P001	5	FLANGE ADAPTOR - 1.8125in 10K (BX-151) x 2in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX1131610215M-A001	3	FLANGE ADAPTOR - 1.8125in 10K (BX-151) x 2in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX1131610215M-P001	4	FLANGE ADAPTOR - 1.8125in 10K (BX-151) x 2in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX1131615215F-A001	2	FLANGE ADAPTOR - 1.8125in 15K (BX-151) x 2in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX1131615215F-P001	2	FLANGE ADAPTOR - 1.8125in 15K (BX-151) x 2in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX210215F2.015ID-A001	1	FLANGE ADAPTOR - 2.0625in 10K (BX-152) x 2in FIG 1502 F x 2.015in ID INTEGRAL 10,000psi SOUR SERVICE
FLX210215F2.015ID-P001	1	FLANGE ADAPTOR - 2.0625in 10K (BX-152) x 2in FIG 1502 F x 2.015in ID INTEGRAL 10,000psi SOUR SERVICE
FLX210315F-A001	2	FLANGE ADAPTOR - 2.0625in 10K (BX-152) x 3in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX210315F-P001	2	FLANGE ADAPTOR - 2.0625in 10K (BX-152) x 3in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX210315M-A001	2	FLANGE ADAPTOR - 2.0625in 10K (BX-152) x 3in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX210315M-P001	2	FLANGE ADAPTOR - 2.0625in 10K (BX-152) x 3in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX215215F-A001	3	FLANGE ADAPTOR - 2.0625in 15K (BX-152) x 2in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX215215F-P001	4	FLANGE ADAPTOR - 2.0625in 15K (BX-152) x 2in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX215215M-A001	3	FLANGE ADAPTOR - 2.0625in 15K (BX-152) x 2in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX215215M-P001	3	FLANGE ADAPTOR - 2.0625in 15K (BX-152) x 2in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX291610215F-A001	1	FLANGE ADAPTOR - 2.5625in 10K (BX-153) x 2in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX291610215F-P001	1	FLANGE ADAPTOR - 2.5625in 10K (BX-153) x 2in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX291610215M-A001	2	FLANGE ADAPTOR - 2.5625in 10K (BX-153) x 2in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX291610215M-P001	3	FLANGE ADAPTOR - 2.5625in 10K (BX-153) x 2in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX291610315MRB-A001	1	FLANGE ADAPTOR - 2.5625in 10K (BX-153) x 3in FIG 1502 M REDUCED BORE INTEGRAL 10,000psi SOUR SERVICE
FLX291610315MRB-P001	1	FLANGE ADAPTOR - 2.5625in 10K (BX-153) x 3in FIG 1502 M REDUCED BORE INTEGRAL 10,000psi SOUR SERVICE
FLX310215F-A001	3	FLANGE ADAPTOR - 3.0625in 10K x 2in FIG 1502 F SOUR SERVICE
FLX310215F-P001	4	FLANGE ADAPTOR - 3.0625in 10K x 2in FIG 1502 F SOUR SERVICE
FLX310215M-A001	4	FLANGE ADAPTOR - 3.0625in 10K x 2in FIG 1502 M SOUR SERVICE
FLX310215M-P001	5	FLANGE ADAPTOR - 3.0625in 10K x 2in FIG 1502 M SOUR SERVICE

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Drawing no	Revision	Description
FLX310315FRB-A001	1	FLANGE ADAPTOR - 3.0625in 10K x 3in FIG 1502 F REDUCED BORE SOUR SERVICE
FLX310315FRB-P001	1	FLANGE ADAPTOR - 3.0625in 10K x 3in FIG 1502 F REDUCED BORE SOUR SERVICE
FLX315315F-A001	4	FLANGE ADAPTOR - 3.0625in 15K x 3in FIG 1502 F SOUR SERVICE
FLX315315F-P001	4	FLANGE ADAPTOR - 3.0625in 15K x 3in FIG 1502 F SOUR SERVICE
FLX315315M-A001	3	FLANGE ADAPTOR - 3.0625in 15K x 3in FIG 1502 M SOUR SERVICE
FLX315315M-P001	5	FLANGE ADAPTOR - 3.0625in 15K x 3in FIG 1502 M SOUR SERVICE
FLX410215F-A001	3	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 2in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX410215F-P001	5	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 2in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX410215M-A001	4	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 2in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX410215M-P001	5	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 2in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX410315F-A001	3	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 3in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX410315F-P001	6	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 3in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX410315FRB-A001	1	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 3in FIG 1502 F REDUCED BORE INTEGRAL 10,000psi SOUR SERVICE
FLX410315FRB-P001	2	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 3in FIG 1502 F REDUCED BORE INTEGRAL 10,000psi SOUR SERVICE
FLX410315M-A001	4	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 3in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX410315M-P001	6	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 3in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX410315MRB-A001	1	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 3in FIG 1502 M REDUCED BORE INTEGRAL 10,000psi SOUR SERVICE
FLX410315MRB-P001	2	FLANGE ADAPTOR - 4.0625in 10K (BX-155) x 3in FIG 1502 M REDUCED BORE INTEGRAL 10,000psi SOUR SERVICE
FLX415415F-A001	2	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 4in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX415415F-P001	2	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 4in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX415415M-A001	2	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 4in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX415415M-P001	3	FLANGE ADAPTOR - 4.0625in 15K (BX-155) x 4in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX510215F-A001	1	FLANGE ADAPTOR - 5.125in 10K (BX-169) x 2in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX510215F-P001	2	FLANGE ADAPTOR - 5.125in 10K (BX-169) x 2in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX710315M-A001	1	FLANGE ADAPTOR - 7.0625in 10K (BX-156) x 3in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX710315M-P001	1	FLANGE ADAPTOR - 7.0625in 10K (BX-156) x 3in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX710415F-A001	1	FLANGE ADAPTOR - 7.0625in 10K (BX-156) x 4in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE
FLX710415F-P001	1	FLANGE ADAPTOR - 7.0625in 10K (BX-156) x 4in FIG 1502 F INTEGRAL 10,000psi SOUR SERVICE

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Drawing no	Revision	Description
FLX710415F6ID-A001	2	FLANGE ADAPTOR - 7.0625in 10K (BX-156) x 4in FIG 1502 F WITH 6in ID x 3in DEEP BORE INTEGRAL 10,000psi SOUR SERVICE
FLX710415F6ID-P001	4	FLANGE ADAPTOR - 7.0625in 10K (BX-156) x 4in FIG 1502 F WITH 6in ID x 3in DEEP BORE INTEGRAL 10,000psi SOUR SERVICE
FLX710415M-A001	1	FLANGE ADAPTOR - 7.0625in 10K (BX-156) x 4in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX710415M-P001	1	FLANGE ADAPTOR - 7.0625in 10K (BX-156) x 4in FIG 1502 M INTEGRAL 10,000psi SOUR SERVICE
FLX710415M6ID-A001	2	FLANGE ADAPTOR - 7.0625in 10K (BX-156) x 4in FIG 1502 M WITH 6in ID x 3in DEEP BORE INTEGRAL 10,000psi SOUR SERVICE
FLX710415M6ID-P001	4	FLANGE ADAPTOR - 7.0625in 10K (BX-156) x 4in FIG 1502 M WITH 6in ID x 3in DEEP BORE INTEGRAL 10,000psi SOUR SERVICE
FT215FMT-A001	2	CUSHION TEE - 2in FIG 1502 MxF 0.50in NPT TAP SOUR SERVICE
FT215FMT-P001	3	CUSHION TEE - 2in FIG 1502 MxF 0.50in NPT TAP SOUR SERVICE
FT315FMT-A001	1	CUSHION TEE - 3in FIG 1502 MxF 0.50in NPT TAP SOUR SERVICE
FT315FMT-P001	1	CUSHION TEE - 3in FIG 1502 MxF 0.50in NPT TAP SOUR SERVICE
IXO215FF-A001	2	CROSSOVER - 2in FIG 1502 FxF SOUR SERVICE
IXO215FF-P001	3	CROSSOVER - 2in FIG 1502 FxF SOUR SERVICE
IXO215M415M-A001	1	CROSSOVER - 2in FIG 1502 M x 4in FIG 1502 M SOUR SERVICE
IXO215M415M-P001	1	CROSSOVER - 2in FIG 1502 M x 4in FIG 1502 M SOUR SERVICE
IXO215MM-A001	2	CROSSOVER - 2in FIG 1502 MxM SOUR SERVICE
IXO215MM-P001	4	CROSSOVER - 2in FIG 1502 MxM SOUR SERVICE
IXO315F215F-A001	2	CROSSOVER - 3in FIG 1502 F x 2in FIG 1502 F SOUR SERVICE
IXO315F215F-P001	3	CROSSOVER - 3in FIG 1502 F x 2in FIG 1502 F SOUR SERVICE
IXO315F215MX11.18IN-A001	1	CROSSOVER - 3in FIG 1502 F x 2in FIG 1502 M x 11.18in LONG SOUR SERVICE
IXO315F215MX11.18IN-P001	1	CROSSOVER - 3in FIG 1502 F x 2in FIG 1502 M x 11.18in LONG SOUR SERVICE
IXO315F215MX9.37IN-A001	1	CROSSOVER - 3in FIG 1502 F x 2in FIG 1502 M x 9.37in LONG SOUR SERVICE
IXO315F215MX9.37IN-P001	1	CROSSOVER - 3in FIG 1502 F x 2in FIG 1502 M x 9.37in LONG SOUR SERVICE
IXO315F215MX9.80IN--P001	1	CROSSOVER - 3in FIG 1502 F x 2in FIG 1502 M x 9.80in LONG SOUR SERVICE
IXO315F215MX9.80IN-A001	1	CROSSOVER - 3in FIG 1502 F x 2in FIG 1502 M x 9.80in LONG SOUR SERVICE
IXO315FF-A001	2	CROSSOVER - 3in FIG 1502 FxF SOUR SERVICE
IXO315FF-P001	3	CROSSOVER - 3in FIG 1502 FxF SOUR SERVICE
IXO315M215F-A001	4	CROSSOVER - 3in FIG 1502 M x 2in FIG 1502 F SOUR SERVICE
IXO315M215F-P001	6	CROSSOVER - 3in FIG 1502 M x 2in FIG 1502 F SOUR SERVICE
IXO315MM-A001	2	CROSSOVER - 3in FIG 1502 MxM SOUR SERVICE
IXO315MM-P001	4	CROSSOVER - 3in FIG 1502 MxM SOUR SERVICE
IXO415F215F-A001	1	CROSSOVER - 4in FIG 1502 F x 2in FIG 1502 F SOUR SERVICE

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Drawing no	Revision	Description
IXO415F215F-P001	1	CROSSOVER - 4in FIG 1502 F x 2in FIG 1502 F SOUR SERVICE
IXO415F215M-A001	3	CROSSOVER - 4in FIG 1502 F x 2in FIG 1502 M SOUR SERVICE
IXO415F215M-P001	3	CROSSOVER - 4in FIG 1502 F x 2in FIG 1502 M SOUR SERVICE
IXO415F315F-A001	1	CROSSOVER - 4in FIG 1502 F x 3in FIG 1502 F SOUR SERVICE
IXO415F315F-P001	1	CROSSOVER - 4in FIG 1502 F x 3in FIG 1502 F SOUR SERVICE
IXO415F315M-A001	2	CROSSOVER - 4in FIG 1502 F x 3in FIG 1502 M SOUR SERVICE
IXO415F315M-P001	3	CROSSOVER - 4in FIG 1502 F x 3in FIG 1502 M SOUR SERVICE
IXO415F315MX9.13IN-A001	1	CROSSOVER - 4in FIG 1502 F x 3in FIG 1502 M x 9.13in LONG SOUR SERVICE
IXO415F315MX9.13IN-P001	1	CROSSOVER - 4in FIG 1502 F x 3in FIG 1502 M x 9.13in LONG SOUR SERVICE
IXO415FF-A001	1	CROSSOVER - 4in FIG 1502 FxF SOUR SERVICE
IXO415FF-P001	1	CROSSOVER - 4in FIG 1502 FxF SOUR SERVICE
IXO415M215F-A001	3	CROSSOVER - 4in FIG 1502 M x 2in FIG 1502 F SOUR SERVICE
IXO415M215F-P001	3	CROSSOVER - 4in FIG 1502 M x 2in FIG 1502 F SOUR SERVICE
IXO415M215M-A001	2	CROSSOVER - 4in FIG 1502 M x 2in FIG 1502 M SOUR SERVICE
IXO415M215M-P001	2	CROSSOVER - 4in FIG 1502 M x 2in FIG 1502 M SOUR SERVICE
IXO415M315F-A001	2	CROSSOVER - 4in FIG 1502 M x 3in FIG 1502 F SOUR SERVICE
IXO415M315F-P001	4	CROSSOVER - 4in FIG 1502 M x 3in FIG 1502 F SOUR SERVICE
IXO415M315M-A001	2	CROSSOVER - 4in FIG 1502 M x 3in FIG 1502 M SOUR SERVICE
IXO415M315M-P001	2	CROSSOVER - 4in FIG 1502 M x 3in FIG 1502 M SOUR SERVICE
T215FFF-A001	1	TEE - 2in FIG 1502 FxFxF SOUR SERVICE
T215FFF-P001	2	TEE - 2in FIG 1502 FxFxF SOUR SERVICE
T215FFF5X7-A001	1	TEE - 2in FIG 1502 FxFxF 5X7 SERIES SOUR SERVICE
T215FFF5X7-P001	1	TEE - 2in FIG 1502 FxFxF 5X7 SERIES SOUR SERVICE
T215FFF5X7T-A001	2	TEE - 2in FIG 1502 FxFxF 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
T215FFF5X7T-P001	1	TEE - 2in FIG 1502 FxFxF 5X7 SERIES 0.50in NPT TAP SOUR SERVICE
T215MMM-A001	1	TEE - 2in FIG 1502 MxMxM SOUR SERVICE
T215MMM-P001	2	TEE - 2in FIG 1502 MxMxM SOUR SERVICE
T315MF215F-A001	5	TEE - 3in FIG 1502 MxF x 2in FIG 1502 F SOUR SERVICE
T315MF215F-P001	5	TEE - 3in FIG 1502 MxF x 2in FIG 1502 F SOUR SERVICE
T315MF215MT-A001	1	TEE - 3in FIG 1502 MxF x 2in FIG 1502 M 0.50in NPT TAP SOUR SERVICE
T315MF215MT-P001	1	TEE - 3in FIG 1502 MxF x 2in FIG 1502 M 0.50in NPT TAP SOUR SERVICE
T315MMM-A001	1	TEE - 3in FIG 1502 MxMxM SOUR SERVICE
T315MMM-P001	1	TEE - 3in FIG 1502 MxMxM SOUR SERVICE
T315MMMx17-A001	1	TEE - 3in FIG 1502 MxMxM x17 SOUR SERVICE
T315MMMx17-P001	1	TEE - 3in FIG 1502 MxMxM x17 SOUR SERVICE
T415MF215F-A001	1	TEE - 4in FIG 1502 MxF 2in FIG 1502 F SOUR SERVICE
T415MF215F-P001	1	TEE - 4in FIG 1502 MxF 2in FIG 1502 F SOUR SERVICE
TH-2in-1502-M-NS-BC	5	THREAD - 2in 1502 MALE NON SEGMENTED BLANKING CAP
TH-3in-1502-M-NS-BC	8	THREAD - 3in 1502 MALE NON SEGMENTED BLANKING CAP
TH-4in-1502-M-NS	8	THREAD - 4in 1502 MALE NON SEGMENTED

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Drawing no Revision Description

TH-4in-1502-M-NS-BC 6 THREAD - 4in 1502 MALE NON SEGMENTED BLANKING CAP

Note: Other part numbers or updated revisions may be acceptable under this Certificate provided 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.

Calculations:

Document no.	Revision	Description
QF0049	17	Min. Wall Thickness sour and std service products
-	1/03/2013	API-CR215XXXX.5625T-P001 - AutoclaveCalc
-	4/24/2014	API-CR215XXXX.5625T-P001 - CrossBodyCalc
-	4/25/2014	API-CR215XXXX57.5625T-P001 - CrossBodyCalc
-	1/03/2013	API-CR315XXXX.5625T-P001 - AutoclaveCalc
-	4/24/2014	API-CR315XXXX.5625T-P001 - CrossBodyCalc
-	4/16/2013	API-FLXXX215X-P001 - AdapterFlangeBodyCalc
-	4/16/2013	API-FLXXX315X-P001 - AdapterFlangeBodyCalc
-	1/07/2013	API-FLXXX415X-P001 - AdapterFlangeBodyCalc
-	11/07/2012	API-FT215FM-P001 - FracTeeBodyCalc
-	11/07/2012	API-FT315FM-P001 - FracTeeBodyCalc
-	11/07/2012	API-FT415FM-P001 - FracTeeBodyCalc
-	11/28/2012	API-IXO215F215M-P001 - MXF CrossOverBodyCalc
-	4/18/2013	API-IXO315F315M-P001 - MXF CrossOverBodyCalc
-	4/18/2013	API-IXO415F415M-P001 - MXF CrossOverBodyCalc
-	11/27/2012	API-T215XXX-P001 - TeeBodyCalc
-	11/27/2012	API-T315XXX-P001 - TeeBodyCalc
-	1/02/2013	API-T415XXX-P001 - TeeBodyCalc
-	11/14/2012	API-TH-NPT-0.5in-ThdMastercalc
-	10/03/2012	TH-2in-FIG-1502-ThdFemaleMastercalc
-	1/21/2013	API-TH-2in-1502-M ThdMaleMastercalc
-	4/12/2013	TH-3in-FIG-1502-F-ThdFemaleMastercalc
-	11/22/2012	API-TH-3in-1502-M ThdMaleMastercalc
-	1/21/2013	API-TH-3in-1502-NS-M ThdMaleMastercalc
-	8/22/2013	TH-4in-FIG-1502-ThdFemaleMastercalc
-	11/22/2012	API-TH-4in-1502-M ThdMaleMastercalc
-	8/28/2013	API-SEG21502-P001 - SegmentCalc
-	8/28/2013	API-SEG31502-P001 - SegmentCalc
-	8/28/2013	API-SEG41502-P001 - SegmentCalc
-	8/28/2013	API-WN21502-P001 - WingNutCalcs
-	8/28/2013	API-WN31502-P001 - WingNutCalcs
-	8/28/2013	API-WN415DET-P001 - WingNutCalcs
-	1/21/2013	API-TH-4in-1502-NS-M ThdMaleMastercalc

Materials:

Part	Material Spec.	Description	Min. Yield	Req'd Charpy @ -50 °F
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Job Id: **262.1-030621-2**
Certificate No: **TAD0000135**
Revision No: **1**

Part	Material Spec.	Description	Min. Yield	Req'd Charpy @ -50 °F
Body, Wing nut	MS-101 Rev.8	4130	75 ksi	20 ft-lbf
Non metallic seals	MS-107 Rev.2	-	-	-
Wing nut segment	MS-102 Rev.5	4140	80 ksi	20 ft-lbf

Note: (1) See material specifications for additional material requirements.

Tests carried out

1. Test report dated 2019-03-19 performed on fitting with serial number 41679-6.

Marking of product

For traceability the following marking is to be carried out on each product:

1. Serial No.
2. Manufacturer's name or trademark.
3. Additional Marking at manufacturer's discretion.

Periodical assessment

For retention of the Type Approval, DNV GL's surveyor shall perform periodical assessment after 2 years and after 3.5 years in accordance with DNV GL's Class Programme DNVGL-CP-0338, Section 4.

Other conditions/comments

1. Procedures related to testing, welding, NDT, and other quality control requirements are to be reviewed/approved by DNV GL's local surveyor.
2. DNV GL ref.: A0640768

END OF CERTIFICATE