

INSPECTION CERTIFICATE

EN10204:2004/3.1

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 &
PED 2014/68/EU MM+AD2000W0 Certified Company

Customer :

QATAR PETROCHEMICAL COMPANY (QAPCO)

Certificate No :

OM/L/MTC/20-21/11094

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Order No :

82479

Date

04-Dec-2020

Invoice No :

Date

Specification : ASTM A105/A105N - 14, ASME B16.48-2010

| No. | Description | Quantity | Heat No. | Heat Treatment |
|-----|-----------------------------------------|------------|----------|------------------------------------|
| 1 | SPADE BLRF FLANGE 2" X 150# X 4MM THK | 44.00 Nos. | F0227 | Normalized at 900°C and Air Cooled |
| 2 | SPADE BLRF FLANGE 3" X 150# X 6MM THK | 4.00 Nos. | F0228 | Normalized at 900°C and Air Cooled |
| 3 | SPADE BLRF FLANGE 4" X 150# X 6MM THK | 9.00 Nos. | F0229 | Normalized at 900°C and Air Cooled |
| 4 | SPADE BLRF FLANGE 12" X 150# X 13MM THK | 14.00 Nos. | F0230 | Normalized at 900°C and Air Cooled |
| 5 | SPADE BLRF FLANGE 14" X 150# X 14MM THK | 2.00 Nos. | F0231 | Normalized at 900°C and Air Cooled |

Chemical Composition


| Heat No. | C% | SI% | Mn% | P% | S% | Cr% | Ni% | Mo% | V% | Cu% | Ceq % |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| F0227 | 0.192 | 0.212 | 0.721 | 0.011 | 0.005 | 0.176 | 0.035 | 0.028 | 0.004 | 0.101 | 0.362 |
| F0228 | 0.179 | 0.187 | 0.688 | 0.015 | 0.009 | 0.182 | 0.037 | 0.035 | 0.002 | 0.086 | 0.345 |
| F0229 | 0.204 | 0.222 | 0.695 | 0.012 | 0.008 | 0.197 | 0.031 | 0.029 | 0.005 | 0.093 | 0.374 |
| F0230 | 0.185 | 0.193 | 0.701 | 0.019 | 0.004 | 0.206 | 0.040 | 0.031 | 0.006 | 0.090 | 0.359 |
| F0231 | 0.197 | 0.202 | 0.736 | 0.014 | 0.006 | 0.190 | 0.042 | 0.030 | 0.003 | 0.107 | 0.374 |

Mechanical Properties

| Heat No. | Tensile | | | | Hardness | |
|----------|------------|------------|------------|-----------|----------|--|
| | U.T.S | Y.S | Elongation | Red. Area | HRB | |
| | Mpa-Rp 0.2 | Mpa-Rp 0.2 | % | % | | |
| F0227 | 621 | 367 | 40 | 60 | 77,78,78 | |
| F0228 | 588 | 352 | 38 | 67 | 76,77,77 | |
| F0229 | 610 | 360 | 41 | 65 | 78,79,79 | |
| F0230 | 614 | 365 | 43 | 62 | 79,79,80 | |
| F0231 | 605 | 370 | 39 | 64 | 76,76,77 | |

| | | | | | |
|-------------------|----|----------------------|----|-------------------|-------|
| Visual Inspection | OK | Dimension Inspection | OK | Country of Origin | INDIA |
|-------------------|----|----------------------|----|-------------------|-------|

| | |
|---------|------------------------------------------------------------|
| Marking | Brand - Item - Size - Specification - Dimension - Heat No. |
|---------|------------------------------------------------------------|

| Remarks | Seal of Customer / Surveyor | FOR OM TUBES & FITTINGS INDUSTRIES |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------|
| 1) Test samples were tested and inspected in accordance with the order & were found to meet the requirements. 2) Material free from mercury or radioactive contamination. 3) No welding or weld repair. 4) Ultrasonic Test as per ASTM SA 388 - Found OK. 5) Material is Fully Killed and Fine grain Practice. | |  QC HEAD |