



INTERNATIONAL TECHNICAL
FOR METAL INDUSTRIES CO. LTD.



الشركة التقنية الدولية
للصناعات المعدنية



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Our Location



International Markets



Introduction

International Technical for Metal Industries Co; Ltd (ITC) an EN ISO 9001:2015 accredited company was founded in 2010 Which is a member of Mahmoud AL-FAR & Partners Company. The parent company has been in Steel Trading Business for more than 5 decades; the group is primarily in Steel Trading and was established in 1962 and located in Amman Jordan.

ITC is located in Al-Muwaqar Development Zone and has a land area of 256,000 Square Meters.

ITC Facility

1. Tubes and Pipes Production commenced in late 2012, ITC has an installed capacity of 200,000 M Tons per year and manufactures sizes from ½" to 6" in Rounds in addition to the vast range of SHS/RHS and Special sections.

2. ITC has the most modern and Automatic Pipe Galvanizing facility in the Middle East, The Galvanizing Plant has been in production since the End of 2017 and has a state of the Art and most modern Galvanizing facility, in addition to Pipes ITC can also cater to Structural Galvanizing with Complex fabrication and also Electric Poles of lengths up to 12.5 meters.

ITC Mission

ITC seeks to improve steadily to become a leading company in the field of Tube and Pipes manufacturing. ITC desires to achieve customer Satisfaction and also aspires to upgrade the skills of its employees through continuous training.

ITC Vision

To be one among the leaders in contributing to the nation's economic growth and infrastructure development.

ITC is committed to achieve global competitiveness in the steel sector by embracing new technologies, maintaining high quality standards and integrity.

Quality policy

The goal of ITC is to provide our customers with high Quality Steel Pipes and Tubes at the most competitive prices and achieve total customer satisfaction. We at ITC believe in continual improvement and development in our technology to deliver the best to our customers and be the market leaders in our segment.

QUALITY ASSURANCE

Quality assurance begins at the raw material stage and continues right through all the manufacturing operations, till the pipes are packed for dispatch. The quality assurance department is fully backed by a modern laboratory for various metallurgical and chemical tests, and a test house for testing physical properties. It has been awarded the prestigious EN ISO 9001, Iso 14001, Iso 45001 certificates by ILMS for its Quality Management Systems.

ITC hand picks feed stock supplier to maintain quality of its products.

Landing and Transportation

The company ship and deliver our products to our customers in all countries in Arabian Gulf area, Iraq and neighboring countries.

International Presence

Product reliability and performance have been synonymous with ITC in the global markets, making it a leading exporter and distributor of High Frequency Induction Welded Steel Pipes and Tubes in many countries worldwide. Our major clients are located in Arabian Gulf, United States of America, Canada, Africa, to name a few.

ITC is proud of its experienced sales team which has made it a market leader in the region and also a very senior team for USA and Canada Markets.



QUALITY PLAN

Incoming Material Control

| S.NO | CHARACTERISTICS / TYPE OF CHECK | QUANTUM/ FREQ OF CHECK | TEST PROCEDURES / CHECKS FOR |
|------|---------------------------------|---------------------------------|---------------------------------------|
| 1 | VISUAL INSPECTION | 100% | SURFACE DEFECT, DAMAGED EDGES |
| 2 | DIMENSIONAL INSPECTION | 100% | MEASURING TAPE, MICROMETER |
| 3 | MECHANICAL PROPERTIES | SAMPLE TESTING FOR VERIFICATION | UNIVERSAL TESTING MACHINE |
| 4 | CHEMICAL COMPOSITIONS | SAMPLE TESTING FOR VERIFICATION | SPECTRO METER , WET CHEMICAL ANALYSIS |

Process Quality Control

| S.NO | CHARACTERISTICS / TYPE OF CHECK | QUANTUM/ FREQ OF CHECK | TEST PROCEDURES / CHECKS FOR |
|---------------------|---|----------------------------------|--|
| TUBE WELDING | | | |
| 1 | VISUAL INSPECTION | 100% | TOOL/ROLLMARKS, OVERLAP WELD BEADS, EMBOSING, STRAIGHTNESS |
| 2 | DIMENSIONAL INSPECTION (OUTSIDE DIAMETER, THICKNESS, LENGTH) | HOURLY | VERNIER, MICROMETER, MEASURING TAPE |
| 3 | METROLOGICAL TEST(SQUARENESS OF THE PIPE ENDS, CORNER RADII) | HOURLY | FILLER/ RADIUS GAUGES |
| 4 | MECHANICAL PROPERTIES | ONE SAMPLE / SHIFT FOR EACH SIZE | UTM (60 TON) |
| 5 | TECHNOLOGICAL TEST (FLATTENING / BEND) | HOURLY | UTM/ BENDING MACHINES (FOR WELD TEST) |
| 6 | NDT (EDDY CURRENT/ HYDRO TEST) | 100% | LEAK TIGHTNESS, AS PER RELEVANT STD, HYDROSTATIC PRESSURE SHALL BE APPLIED |

Process Quality Control

| S.NO | CHARACTERISTICS / TYPE OF CHECK | QUANTUM/ FREQ OF CHECK | TEST PROCEDURES / CHECKS FOR |
|--------------------|------------------------------------|------------------------|--|
| Galvanizing | | | |
| 1 | VISUAL INSPECTION | 100% | SURFACE FINISH, BLACK / BARE SPOTS |
| 2 | ZINC COATING | HOURLY | WITH ELCOMETERS (THICKNESS IN MICRONS) |
| 3 | UNIFORMITY | AS / RELEVANT STD | STRIPPING TEST (MASS IN GM/M2) |
| 4 | ADHESION (BEND & FLATTENING TEST) | AS / RELEVANT STD | DIP TEST (IN COPPER SULPHATE SOLUTION) |
| | | | BENDING MACHINES / UTM / PIVOT HAMMER TEST |

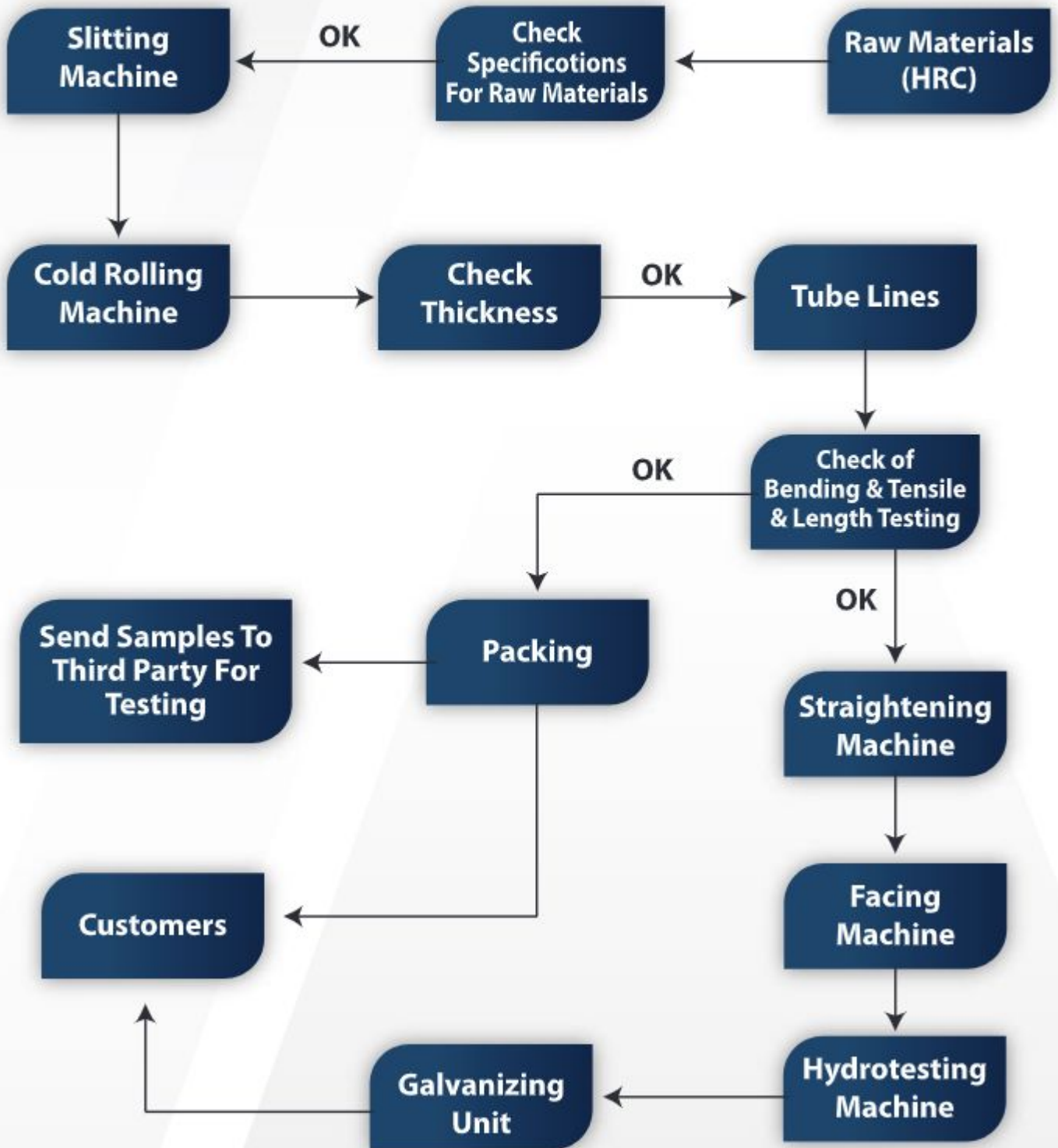
Threading

| | | | |
|---|-------------------|--------|--------------------------------------|
| 1 | VISUAL INSPECTION | 100% | BURNT, BROKEN, ROUGH & SHORT THREADS |
| 2 | METROLOGICAL TEST | HOURLY | THREAD GAUGES AS / RELEVANT STD |

Final Inspection

| | | | |
|---|-------------------|-----------|--|
| 1 | VISUAL INSPECTION | 100% | ALL DEFECTS OF PROCESS CONTROL, MARKING, QUALITY |
| 2 | DIMENSIONAL | AT RANDOM | MEASURING INSTRUMENTS |

Production Processes in The Factory



Production Lines

Cold Rolling Mills



Slitting Machines



Straightening Machines



Production lines for pipes and tubes



Hydro testing Machines



Facing Machines



Cut to length line



Galvanizing Factory



Kettle Specifications

Length of Kettle (Net 14 M)

Width of Kettle (1.7 M)

Depth of Kettle (3.3 M)



CERTIFICATES



PRODUCTS

TECHNICAL DATA OF BLACK AND HOT DIP GALVANIZED STEEL PIPES CONFORMING TO ASTM A 53 GRADE A SCH-40

| NOMINAL PIPE SIZE INCH | MM | OUTSIDE DIAMETER STANDARD | | WALL THICKNESS STANDARD | | WEIGHT OF BLACK PIPES PLAIN END | | | TEST PRESSURE GRADE A | | | SOCKET DIMENSIONS | | | NO.OF PCS PER LIFT | |
|---------------------------|-----|------------------------------|--------|----------------------------|------|------------------------------------|---------|-------|--------------------------|------|-------|-------------------|-------|---------------------|--------------------------|--------------------|
| | | INCH | MM | INCH | MM | KG/MTR | MTR/TON | LB/FT | FT/TON | PSI | KPA | INCH | MM | MIN OUTSIDE INCH | MM | MIN LENGTH INCH |
| 1/2 | 15 | 0.84 | 21.30 | 0.11 | 2.77 | 1.27 | 787 | 0.85 | 2583 | 700 | 4800 | 1.06 | 27 | 1.50 | 38.10 | 120 |
| 3/4 | 20 | 1.05 | 26.70 | 0.11 | 2.87 | 1.69 | 592 | 1.13 | 1941 | 700 | 4800 | 1.31 | 33.4 | 1.56 | 39.70 | 84 |
| 1 | 25 | 1.32 | 33.40 | 0.13 | 3.38 | 2.50 | 400 | 1.68 | 1312 | 700 | 4800 | 1.58 | 40 | 1.94 | 49.20 | 60 |
| 1.1/4 | 32 | 1.66 | 42.20 | 0.14 | 3.56 | 3.39 | 295 | 2.27 | 968 | 1200 | 8300 | 1.90 | 48.3 | 2.00 | 50.80 | 42 |
| 1.1/2 | 40 | 1.90 | 48.30 | 0.15 | 3.68 | 4.05 | 247 | 2.72 | 810 | 1200 | 8300 | 2.20 | 55.9 | 2.00 | 50.80 | 36 |
| 2 | 50 | 2.38 | 60.30 | 0.15 | 3.91 | 5.44 | 184 | 3.66 | 603 | 2300 | 15900 | 2.75 | 69.8 | 2.06 | 52.40 | 26 |
| 2.1/2 | 65 | 2.88 | 73.00 | 0.20 | 5.16 | 8.63 | 116 | 5.80 | 380 | 2500 | 17200 | 3.25 | 82.5 | 3.06 | 77.80 | 18 |
| 3 | 80 | 3.50 | 88.90 | 0.22 | 5.49 | 11.29 | 89 | 7.58 | 291 | 2220 | 15300 | 4.00 | 101.6 | 3.19 | 81.00 | 14 |
| 3.1/2 | 90 | 4.00 | 101.60 | 0.23 | 5.74 | 13.57 | 74 | 9.12 | 242 | 2030 | 14000 | 4.63 | 117.5 | 3.31 | 84.10 | 12 |
| 4 | 100 | 4.50 | 114.30 | 0.24 | 6.02 | 16.07 | 62 | 10.80 | 204 | 1900 | 13100 | 5.00 | 127 | 3.44 | 87.30 | 10 |
| 5 | 125 | 5.56 | 141.30 | 0.26 | 6.55 | 21.77 | 46 | 14.63 | 151 | 1670 | 11500 | 6.30 | 159.9 | 3.69 | 93.70 | 7 |
| 6 | 150 | 6.63 | 168.30 | 0.28 | 7.11 | 28.26 | 35 | 18.99 | 116 | 1520 | 10500 | 7.39 | 187.7 | 4.94 | 125.40 | 7 |
| 8 | 200 | 8.63 | 219.10 | 0.32 | 8.18 | 42.55 | 24 | 28.58 | 79 | 1340 | 9200 | -- | -- | -- | -- | 3 |

CHEMICAL COMPOSITION (% MAX)

| ELEMENT ---> | Carbon | | Manganese | | Phosphorus | | Sulphur | | Copper | | Nickel | | Chromium | | Molybdenum | | Vanadium | |
|--------------|--------|------|-----------|------|------------|------|---------|-------|--------|------|--------|------|----------|------|------------|------|----------|------|
| | C | 0.25 | Mn | 0.95 | P | 0.05 | S | 0.045 | Cu | 0.40 | Ni | 0.40 | Cr | 0.40 | Mo | 0.15 | V | 0.08 |
| GRADE-A | | | | | | | | | | | | | | | | | | |

MECHANICAL PROPERTIES

| PROPERTIES ---> | Tensile Strength | | Yield Strength | |
|-----------------|------------------|-----|----------------|-----|
| | psi | MPa | psi | MPa |
| GRADE-A | 48000 | 330 | 30000 | 205 |

Min Percentage Elongation in 2" [50mm] rounded to nearest 1/2

$$e = 625,000[1940] \times (A^{0.2} / U^{0.9})$$

A = cross sectional area of the tension specimen, rounded to the nearest 0.01 inch² [1mm²], based on specified outside diameter. If the area is more than 0.75 inch² [500mm²], then the value 0.75 inch² [500mm²] shall be used.

U = specified minimum tensile strength, psi[MPa].

TOLERANCES

OUTSIDE DIAMETER

| SIZE FROM INCH (MM) | SIZE TO INCH (MM) | TOLERANCE INCH(MM) | |
|------------------------|----------------------|--------------------|-------------|
| | | POSITIVE | NEGATIVE |
| 1/2 (15) | 1.1/2(40) | 1/64 (0.40) | 1/64 (0.40) |
| 2 (50) | 8 (200) | 1% OF OD | 1% OF OD |

THICKNESS : 12.5% max under the nominal wall thickness

WEIGHT : + / - 10% on calculated standard weight.

END FINISH : Square Cut Ends for sizes less than or equal to 1.1/2" NPS Beveled Ends at 30° -0°/+5° for sizes 2" NPS and above.

BEND TEST : Applicable for sizes 2" NPS and below 90° bending radius should be 12 times of the tube diameter.

FLATTENING TEST : Applicable for sizes 2" NPS and above in three stages.

STAGE-1 : For weld ductility until 2/3 of outside dia of specimen tube.

STAGE-2 : For ductility of steel until 1/3 of outside dia of specimen tube.

STAGE-3 : Full flattening for testing of laminated and unsound material.

ZINC COATING

MINIMUM : 1.60 oz / ft² [490 Gm / Mtr²]

AVERAGE : 1.80 oz / ft² [550 Gm / Mtr²]

MARKING : Each pipe is stenciled as ITC JORDAN, ASTM A 53 GR A / B-ERW SCH 40 NPS-LENGTH-HEAT NO"

TECHNICAL DATA OF BLACK AND HOT DIP GALVANIZED STEEL PIPES = ASTM A 135 / A795 GRADE A

| NOMINAL PIPE SIZE | | OUTSIDE STANDARD | | WALL THICKNESS STANDARD | | WEIGHT OF BLACK PIPES PLAIN END PIPES | | | | TEST PRESSURE | |
|-------------------|-----|------------------|-------|-------------------------|------|---------------------------------------|---------|--------|--------|---------------|------|
| INCH | MM | INCH | MM | INCH | MM | KG/MTR | MTR/TON | LB/FT | FT/TON | PSI | KPA |
| 3/4 | 20 | 1.050 | 26.7 | 0.083* | 2.11 | 1.28 | 781 | 0.860 | 2562 | 700 | 4830 |
| 1 | 25 | 1.315 | 33.4 | 0.109* | 2.77 | 2.09 | 478 | 1.410 | 1568 | 700 | 4830 |
| 1.1/4 | 32 | 1.660 | 42.2 | 0.109* | 2.77 | 2.69 | 372 | 1.810 | 1221 | 1000 | 6890 |
| 1.1/2 | 40 | 1.900 | 48.3 | 0.109* | 2.77 | 3.11 | 322 | 2.090 | 1056 | 1000 | 6890 |
| 2 | 50 | 2.375 | 60.3 | 0.109* | 2.77 | 3.93 | 254 | 2.640 | 833 | 1000 | 6890 |
| 2.1/2 | 65 | 2.875 | 73.0 | 0.120* | 3.05 | 5.26 | 190 | 3.530 | 623 | 1000 | 6890 |
| 3 | 80 | 3.500 | 88.9 | 0.120* | 3.05 | 6.46 | 155 | 4.340 | 509 | 1000 | 6890 |
| 3.1/2 | 90 | 4.000 | 101.6 | 0.120* | 3.05 | 7.41 | 135 | 4.980 | 443 | 1200 | 8270 |
| 4 | 100 | 4.500 | 114.3 | 0.120* | 3.05 | 8.37 | 119 | 5.620 | 390 | 1200 | 8270 |
| 5 | 125 | 5.563 | 141.3 | 0.134* | 3.40 | 11.58 | 86 | 7.780 | 283 | 1200 | 8270 |
| 6 | 150 | 6.625 | 168.3 | 0.134* | 3.40 | 13.85 | 72 | 9.300 | 237 | 1000 | 6890 |
| 8 | 200 | 8.625 | 219.1 | 0.188** | 4.78 | 25.26 | 40 | 16.960 | 130 | 800 | 5520 |

* Schedule 10 Thickness

** Not Schedule 10

CHEMICAL PROPERTIES

| ELEMENT -----> | Carbon C | Manganese Mn | Phosphorus P | Sulphur S |
|----------------|----------|--------------|--------------|-----------|
| GRADE-A | 0.25 | 0.95 | 0.035 | 0.035 |

MECHANICAL PROPERTIES

| PROPERTIES ---> | Tensile Strength | | Yield Strength | |
|-----------------|------------------|-----|----------------|-----|
| | psi | MPa | psi | MPa |
| GRADE-A | 48000 | 330 | 30000 | 205 |

Min percent elongation in 2"(50mm) is

% El (Grade-A) = 56t + 16.5

Where t = specified wall thickness (inch)

TOLERANCES

OUTSIDE DIAMETER

| SIZE FROM | SIZE TO | TOLERANCE INCH(MM) | |
|-----------|-----------|--------------------|----------------|
| | | POSITIVE | NEGATIVE |
| 3/4 (20) | 1.1/2(40) | 1/64 (0.40) | 1/32 (0.80) |
| 2 (50) | 8 (200) | 1% OF OD | 1% OF OD |

THICKNESS : 12.5% max under the nominal wall thickness.

WEIGHT : +/-10% on calculated standard nominal weight.

MARKING

Each pipe is stenciled as "ITC JORDAN, ASTM A135/A795 GR A - ERW SCH 10(or Thk-Inch) NPS-LENGTH-HEAT NO"

ZINC COATING

MINIMUM : 1.30 oz / ft² [400 Gm / Mtr²]

AVERAGE : 1.50 oz / ft² [460 Gm / Mtr²]

FLATTENING TEST

STAGE-1 : For weld ductility until 2/3 of outside dia of specimen tube.

STAGE-2 : For ductility of steel until 1/3 of outside dia of specimen tube.

STAGE-3 : Full flattening for testing of laminated and unsound material.

GALVANIZED PIPE
TECHNICAL DATA OF BLACK AND GALVANIZED STEEL PIPES CONFORMING TO EN-10219-1 & 2
CHEMICAL COMPOSITION / MECHANICAL PROPERTIES OF NON ALLOY STEEL

| GRADE | % Carbon C (max) | % Silicon Si (max) | % Manganese Mn (max) | % Phosphorus P (max) | % Sulfur S (max) | % Nitrogen N (max) | Max Carbon Eq CEV | Minimum Yield Strength R _{eH} (MPa) | Tensile Strength R _m | | Min Elongation (%) | Minimum Impact Energy (J) | |
|---------|------------------|--------------------|----------------------|----------------------|------------------|--------------------|-------------------|--|---------------------------------|---------|--------------------|---------------------------|------|
| | | | | | | | | | Thk<3mm | Thk≥3mm | | -20 °C | 0 °C |
| S235JRH | 0.17 | -- | 1.40 | 0.040 | 0.040 | 0.009 | 0.35 | 235 | 360-510 | 360-510 | 24 | -- | 27 |
| S275J0H | 0.20 | -- | 1.50 | 0.035 | 0.035 | 0.009 | 0.40 | 275 | 430-580 | 410-560 | 20 | -- | 27 |
| S275J2H | 0.20 | -- | 1.50 | 0.030 | 0.030 | -- | 0.40 | 275 | 430-580 | 410-560 | 20 | 27 | -- |
| S355J0H | 0.22 | 0.55 | 1.60 | 0.035 | 0.035 | 0.009 | 0.45 | 355 | 510-680 | 470-630 | 20 | -- | 27 |
| S355J2H | 0.22 | 0.55 | 1.60 | 0.030 | 0.030 | -- | 0.45 | 355 | 510-680 | 470-630 | 20 | 27 | -- |
| S355K2H | 0.22 | 0.55 | 1.60 | 0.030 | 0.030 | -- | 0.45 | 355 | 510-680 | 470-630 | 20 | 40 | -- |

CARBON EQUIVALENT: Max carbon equivalent shall be

$$CEV = C + (Mn/6) + (Cr + Mo + V)/5 + (Ni + Cu)/15$$

DIMENSIONS AND TOLERANCES: All dimensions and tolerances shall be according to EN 10219:2006 Part-2

SIZE RANGE:

CHS : 21.3 mm OD to 219.1 mm OD

SHS : 16x16, 19x19, 25x25, 30x30, 38x38, 40x40,50x50, 60x60, 80x80, 100x100, 120x120 (mm x mm)

RHS : 40x20, 50x25, 60x30, 80x40, 100x50,120x80 (mm x mm)

TOLERANCES

| CHARACTERIC | CIRCULAR HOLLOW SECTIONS | SQUARE AND RECTANGULAR HOLLOW SECTIONS |
|---------------------------------|--|---|
| OUTSIDE DIMENSIONS (D, B and H) | +/- 1% with a minimum of +/-0.50 mm & a maximum of +/-1.0 mm | Side Length (mm) H, B < 100 100 ≤ H, B ≤ 200 H, B > 200 Tolerance +/- 1% with a min +/-0.5mm +/- 0.8% +/- 0.6% |
| THICKNESS | For D<406.4mm: +/-10% for Thickness≤5.0mm +/- For D<406.4mm: +/-10% with a maximum of +/- 2% for hollow sections having a diameter to thickness ratios≤100 | +/-10% for Thickness ≤5.0mm +/-0.5mm for Thickness >5.0mm |
| OUT OF ROUNDNESS | -- | -- |
| CONCAVITY / CONVEXITY | -- | Max 0.8% with a minimum of 0.5mm |
| SQUARENESS OF SIDE | -- | 900 +/- 10 T ≤ 6.0mm 1.6T to 2.4T 6.0 < T ≤ 10.0mm 2.0T to 3.0T T > 10.0mm 2.4T to 3.6T 2mm plus 0.5mm/m length |
| EXTERNAL CORNER PROFILE | -- | 0.15% of total length and 3mm over any 1m length +/- 6% on individual delivered lengths |
| TWIST | -- | 3.5mm for T ≤ 14.2mm and 4.8mm for T > 14.2mm |
| STRAIGHTNESS | 0.20% of total length and 3mm over any 1m length | |
| MASS PER UNIT LENGTH | +/- 6% on individual delivered lengths | |
| MAX WELD BEAD HEIGHT | | |

NON DESTRUCTIVE TEST : Eddy Current Testing 100% on-line

MARKING : EN 10219 STEEL GRADE / ITC JORDAN / SIZE / THICKNESS / LENGTH / HEAT NO xxxxxxxx

TABLE-1 : TECHNICAL DATA OF BLACK AND GALVANIZED STEEL PIPES CONFORMING TO EN 10255:2004 (SUPERCEDES BS 1387 : 1985)

| CLASS | SIZE | | OUTSIDE DIAMETER | | WALL THICKNESS | | WEIGHT OF BLACK PIPES | | | | WEIGHT OF GALVANIZED PIPES (CALCULATED) | | | | NO. OF PIPES PACKED PER STANDARD BUNDLE TONNE APPROX | | | | | | |
|---------------|-------|--------------|------------------|--------|----------------|--------|-----------------------|---------|--------------------|--------|---|--------|--------------------|---------|--|--------|--------|--------|-----|------|-----|
| | Dtl | Specified OD | MAX | | MIN | | PLAIN ENDED | | SCREWED & SOCKETED | | PLAIN ENDED | | SCREWED & SOCKETED | | | | | | | | |
| | | | Inch | mm | Inch | mm | Kg/Mtr | mtr/ton | ft/ton | Kg/Mtr | mtr/ton | ft/ton | Kg/Mtr | mtr/ton | | ft/ton | | | | | |
| TYPE L2 | 1/2 | 21.3 | 0.843 | 21.40 | 0.827 | 21.00 | 0.079 | 2.00 | 0.947 | 1056 | 3464 | 0.956 | 1046 | 3432 | 0.995 | 1005 | 3297 | 1.004 | 996 | 3268 | 160 |
| | 3/4 | 26.9 | 1.059 | 26.90 | 1.039 | 26.40 | 0.091 | 2.30 | 1.380 | 725 | 2377 | 1.390 | 719 | 2360 | 1.441 | 694 | 2277 | 1.451 | 689 | 2261 | 110 |
| | 1 | 33.7 | 1.331 | 33.80 | 1.307 | 33.20 | 0.102 | 2.60 | 1.980 | 505 | 1657 | 2.000 | 500 | 1640 | 2.058 | 486 | 1594 | 2.078 | 481 | 1579 | 80 |
| | 1.1/4 | 42.4 | 1.673 | 42.50 | 1.650 | 41.90 | 0.102 | 2.60 | 2.540 | 394 | 1292 | 2.570 | 389 | 1277 | 2.640 | 379 | 1243 | 2.670 | 375 | 1229 | 61 |
| | 1.1/2 | 48.3 | 1.906 | 48.40 | 1.882 | 47.80 | 0.114 | 2.90 | 3.230 | 310 | 1016 | 3.270 | 306 | 1003 | 3.344 | 299 | 981 | 3.384 | 296 | 970 | 51 |
| | 2 | 60.3 | 2.370 | 60.20 | 2.346 | 59.60 | 0.114 | 2.90 | 4.080 | 245 | 804 | 4.150 | 241 | 791 | 4.223 | 237 | 777 | 4.293 | 233 | 764 | 37 |
| MEDIUM SERIES | 2.1/2 | 76.1 | 2.992 | 76.00 | 2.961 | 75.20 | 0.126 | 3.20 | 5.710 | 175 | 575 | 5.830 | 172 | 563 | 5.892 | 170 | 557 | 6.012 | 166 | 546 | 27 |
| | 3 | 88.9 | 3.492 | 88.70 | 3.461 | 87.90 | 0.126 | 3.20 | 6.720 | 149 | 488 | 6.890 | 145 | 476 | 6.934 | 144 | 473 | 7.104 | 141 | 462 | 24 |
| | 4 | 114.3 | 4.484 | 113.90 | 4.449 | 113.00 | 0.142 | 3.60 | 9.750 | 103 | 336 | 10.000 | 100 | 328 | 10.026 | 100 | 327 | 10.276 | 97 | 319 | 16 |
| | 1/2 | 21.3 | 0.858 | 21.80 | 0.827 | 21.00 | 0.102 | 2.60 | 1.210 | 826 | 2711 | 1.220 | 820 | 2689 | 1.257 | 796 | 2610 | 1.266 | 790 | 2592 | 130 |
| | 3/4 | 26.9 | 1.075 | 27.30 | 1.043 | 26.50 | 0.102 | 2.60 | 1.560 | 641 | 2103 | 1.570 | 637 | 2080 | 1.621 | 617 | 2024 | 1.631 | 613 | 2012 | 100 |
| | 1 | 33.7 | 1.346 | 34.20 | 1.311 | 33.30 | 0.126 | 3.20 | 2.410 | 415 | 1361 | 2.430 | 412 | 1350 | 2.487 | 402 | 1319 | 2.507 | 399 | 1309 | 65 |
| HEAVY SERIES | 1.1/4 | 42.4 | 1.689 | 42.90 | 1.654 | 42.00 | 0.126 | 3.20 | 3.100 | 323 | 1058 | 3.130 | 319 | 1048 | 3.199 | 313 | 1026 | 3.229 | 310 | 1016 | 51 |
| | 1.1/2 | 48.3 | 1.921 | 48.80 | 1.886 | 47.90 | 0.126 | 3.20 | 3.560 | 281 | 922 | 3.600 | 278 | 911 | 3.684 | 271 | 891 | 3.724 | 269 | 881 | 44 |
| | 2 | 60.3 | 2.394 | 60.80 | 2.350 | 59.70 | 0.142 | 3.60 | 5.030 | 199 | 652 | 5.100 | 196 | 643 | 5.172 | 193 | 634 | 5.242 | 191 | 626 | 30 |
| | 2.1/2 | 76.1 | 3.016 | 76.60 | 2.965 | 75.30 | 0.142 | 3.60 | 6.420 | 156 | 511 | 6.540 | 153 | 502 | 6.612 | 151 | 496 | 6.732 | 149 | 487 | 24 |
| | 3 | 88.9 | 3.524 | 89.50 | 3.465 | 88.00 | 0.157 | 4.00 | 8.360 | 120 | 392 | 8.530 | 117 | 385 | 8.583 | 117 | 382 | 8.753 | 114 | 375 | 19 |
| | 4 | 114.3 | 4.528 | 115.00 | 4.453 | 113.10 | 0.177 | 4.50 | 12.200 | 82 | 269 | 12.500 | 80 | 262 | 12.476 | 80 | 263 | 12.726 | 79 | 258 | 14 |
| HEAVY SERIES | 5 | 139.7 | 5.543 | 140.80 | 5.453 | 138.50 | 0.197 | 5.00 | 16.600 | 60 | 198 | 17.100 | 58 | 192 | 16.938 | 59 | 194 | 17.438 | 57 | 188 | 10 |
| | 6 | 165.1 | 6.555 | 166.50 | 6.453 | 163.90 | 0.197 | 5.00 | 19.800 | 51 | 166 | 20.400 | 49 | 161 | 20.102 | 50 | 163 | 20.702 | 48 | 158 | 7 |
| | 1/2 | 21.3 | 0.858 | 21.80 | 0.827 | 21.00 | 0.126 | 3.20 | 1.440 | 694 | 2278 | 1.450 | 690 | 2263 | 1.486 | 673 | 2208 | 1.495 | 669 | 2195 | 110 |
| | 3/4 | 26.9 | 1.075 | 27.30 | 1.043 | 26.50 | 0.126 | 3.20 | 1.870 | 595 | 1754 | 1.880 | 592 | 1745 | 1.930 | 578 | 1700 | 1.940 | 575 | 1691 | 80 |
| | 1 | 33.7 | 1.346 | 34.20 | 1.311 | 33.30 | 0.157 | 4.00 | 2.930 | 341 | 1120 | 2.950 | 339 | 1112 | 3.015 | 332 | 1088 | 3.035 | 329 | 1081 | 55 |
| | 1.1/4 | 42.4 | 1.689 | 42.90 | 1.654 | 42.00 | 0.157 | 4.00 | 3.790 | 264 | 866 | 3.820 | 262 | 859 | 3.897 | 257 | 842 | 3.927 | 255 | 835 | 44 |
| HEAVY SERIES | 1.1/2 | 48.3 | 1.921 | 48.80 | 1.886 | 47.90 | 0.157 | 4.00 | 4.370 | 229 | 751 | 4.410 | 227 | 744 | 4.492 | 223 | 730 | 4.532 | 221 | 724 | 37 |
| | 2 | 60.3 | 2.394 | 60.80 | 2.350 | 59.70 | 0.177 | 4.50 | 6.190 | 162 | 530 | 6.260 | 160 | 524 | 6.330 | 158 | 518 | 6.400 | 156 | 513 | 27 |
| | 2.1/2 | 76.1 | 3.016 | 76.60 | 2.965 | 75.30 | 0.177 | 4.50 | 7.930 | 126 | 414 | 8.050 | 124 | 408 | 8.110 | 123 | 405 | 8.230 | 122 | 399 | 20 |
| | 3 | 88.9 | 3.524 | 89.50 | 3.465 | 88.00 | 0.197 | 5.00 | 10.300 | 97 | 319 | 10.500 | 95 | 312 | 10.510 | 95 | 312 | 10.680 | 94 | 307 | 16 |
| | 4 | 114.3 | 4.528 | 115.00 | 4.453 | 113.10 | 0.213 | 5.40 | 14.500 | 69 | 226 | 14.800 | 68 | 222 | 14.774 | 68 | 222 | 15.024 | 67 | 218 | 12 |
| | 5 | 139.7 | 5.543 | 140.80 | 5.453 | 138.50 | 0.213 | 5.40 | 17.900 | 56 | 183 | 18.400 | 54 | 178 | 18.238 | 55 | 180 | 18.738 | 53 | 175 | 10 |
| 6 | 165.1 | 6.555 | 166.50 | 6.453 | 163.90 | 0.213 | 5.40 | 21.300 | 47 | 154 | 21.900 | 46 | 150 | 21.702 | 46 | 151 | 22.302 | 45 | 147 | 7 | |

TABLE-2 : TECHNICAL DATA OF BLACK AND GALVANIZED STEEL PIPES CONFORMING TO EN 10255:2004 (SUPERCEDES BS 1387: 1985)

| CLASS | SIZE | | OUTSIDE DIAMETER | | | | WALL THICKNESS | | WEIGHT OF BLACK PIPES | | | | WEIGHT OF GALVANIZED PIPES (CALCULATED) | | | | NO OF PIPES PACKED PER STANDARD BUNDLE TONNE | | | | |
|---------|-------|--------------|------------------|--------|-------|--------|----------------|------|-----------------------|---------|--------------------|--------|---|--------|--------------------|---------|--|--------|--------|---------|--------|
| | DN | Specified OD | MAX | | MIN | | Inch | mm | PLAIN ENDED | | SCREWED & SOCKETED | | PLAIN ENDED | | SCREWED & SOCKETED | | | | | | |
| | | | Inch | mm | Inch | mm | | | Kg/Mtr | mtr/ton | ft/ton | Kg/Mtr | mtr/ton | ft/ton | Kg/Mtr | mtr/ton | | ft/ton | Kg/Mtr | mtr/ton | ft/ton |
| TYPE L | 1/2 | 21.3 | 0.854 | 21.70 | 0.827 | 21.00 | 0.091 | 2.30 | 1.080 | 926 | 3038 | 1.090 | 917 | 3010 | 1.126 | 888 | 2914 | 1.135 | 881 | 2891 | 160 |
| | 3/4 | 26.9 | 1.067 | 27.10 | 1.039 | 26.40 | 0.091 | 2.30 | 1.400 | 714 | 2343 | 1.410 | 709 | 2327 | 1.441 | 694 | 2277 | 1.451 | 689 | 2261 | 110 |
| | 1 | 33.7 | 1.339 | 34.00 | 1.307 | 33.20 | 0.114 | 2.90 | 2.200 | 455 | 1491 | 2.220 | 450 | 1478 | 2.280 | 439 | 1439 | 2.300 | 435 | 1426 | 80 |
| | 1.1/4 | 42.4 | 1.681 | 42.70 | 1.650 | 41.90 | 0.114 | 2.90 | 2.820 | 355 | 1163 | 2.850 | 351 | 1151 | 2.924 | 342 | 1122 | 2.954 | 339 | 1111 | 61 |
| | 1.1/2 | 48.3 | 1.913 | 48.60 | 1.882 | 47.80 | 0.114 | 2.90 | 3.250 | 308 | 1009 | 3.290 | 304 | 997 | 3.344 | 299 | 981 | 3.384 | 296 | 970 | 51 |
| | 2 | 60.3 | 2.390 | 60.70 | 2.346 | 59.60 | 0.126 | 3.20 | 4.510 | 222 | 727 | 4.580 | 218 | 716 | 4.650 | 215 | 706 | 4.720 | 212 | 695 | 37 |
| | 2.1/2 | 76.1 | 2.992 | 76.00 | 2.961 | 75.20 | 0.126 | 3.20 | 5.750 | 174 | 571 | 5.870 | 170 | 559 | 5.892 | 170 | 557 | 6.012 | 166 | 546 | 27 |
| | 3 | 88.9 | 3.492 | 88.70 | 3.461 | 87.90 | 0.126 | 3.20 | 6.760 | 148 | 485 | 6.930 | 144 | 473 | 6.934 | 144 | 473 | 7.104 | 141 | 462 | 24 |
| | 3.1/2 | 101.6 | 3.984 | 101.20 | 3.949 | 100.30 | 0.142 | 3.60 | 8.700 | 115 | 377 | 8.880 | 113 | 369 | 8.947 | 112 | 367 | 9.126 | 110 | 360 | 18 |
| | 4 | 114.3 | 4.484 | 113.90 | 4.449 | 113.00 | 0.142 | 3.60 | 9.830 | 102 | 334 | 10.100 | 99 | 325 | 10.026 | 100 | 327 | 10.276 | 97 | 319 | 16 |
| | 5 | 139.7 | 5.543 | 140.80 | 5.453 | 138.50 | 0.177 | 4.50 | 15.000 | 67 | 219 | 15.500 | 65 | 212 | 15.344 | 65 | 214 | 15.844 | 63 | 207 | 10 |
| | 6 | 165.1 | 6.555 | 166.50 | 6.453 | 163.90 | 0.177 | 4.50 | 17.800 | 56 | 184 | 18.400 | 54 | 178 | 18.227 | 55 | 180 | 18.827 | 53 | 174 | 7 |
| TYPE L1 | 1/2 | 21.3 | 0.854 | 21.70 | 0.827 | 21.00 | 0.091 | 2.30 | 1.080 | 926 | 3038 | 1.090 | 917 | 3010 | 1.126 | 888 | 2914 | 1.135 | 881 | 2891 | 160 |
| | 3/4 | 26.9 | 1.067 | 27.10 | 1.039 | 26.40 | 0.091 | 2.30 | 1.390 | 719 | 2360 | 1.400 | 714 | 2343 | 1.441 | 694 | 2277 | 1.451 | 689 | 2261 | 110 |
| | 1 | 33.7 | 1.339 | 34.00 | 1.307 | 33.20 | 0.114 | 2.90 | 2.200 | 455 | 1491 | 2.220 | 450 | 1478 | 2.280 | 439 | 1439 | 2.300 | 435 | 1426 | 80 |
| | 1.1/4 | 42.4 | 1.681 | 42.70 | 1.650 | 41.90 | 0.114 | 2.90 | 2.820 | 355 | 1163 | 2.850 | 351 | 1151 | 2.924 | 342 | 1122 | 2.954 | 339 | 1111 | 61 |
| | 1.1/2 | 48.3 | 1.913 | 48.60 | 1.882 | 47.80 | 0.114 | 2.90 | 3.240 | 309 | 1013 | 3.280 | 305 | 1000 | 3.344 | 299 | 981 | 3.384 | 296 | 970 | 51 |
| | 2 | 60.3 | 2.390 | 60.70 | 2.346 | 59.60 | 0.126 | 3.20 | 4.490 | 223 | 731 | 4.560 | 219 | 719 | 4.650 | 215 | 706 | 4.720 | 212 | 695 | 37 |
| | 2.1/2 | 76.1 | 3.004 | 76.30 | 2.961 | 75.20 | 0.126 | 3.20 | 5.730 | 175 | 573 | 5.850 | 171 | 561 | 5.892 | 170 | 557 | 6.012 | 166 | 546 | 27 |
| | 3 | 88.9 | 3.520 | 89.40 | 3.461 | 87.90 | 0.142 | 3.60 | 7.550 | 132 | 435 | 7.720 | 130 | 425 | 7.787 | 128 | 421 | 7.957 | 126 | 412 | 24 |
| | 4 | 114.3 | 4.524 | 114.90 | 4.449 | 113.00 | 0.157 | 4.00 | 10.800 | 93 | 304 | 11.100 | 90 | 296 | 11.158 | 90 | 294 | 11.408 | 88 | 288 | 16 |

TOLERANCES

| | |
|-------------------------|--|
| OUTSIDE DIAMETER | : AS PER TABLE 1 / 2 |
| THICKNESS | : +/-10% FOR M, H SERIES AND TYPE L -8% WITH PLUS TOLERANCE LIMITED BY THE MASS TOLERANCE FOR TYPES L1 AND L2 |
| MASS | : +/-7.5% FOR M, H SERIES AND TYPE L (FOR LOT ≥ 10 TONS) +10 / - 8 ON INDIVIDUAL TUBES FOR TYPES L1 AND L2 |

MECHANICAL PROPERTIES Steel grade S195T

| | |
|-------------------------|--|
| YIELD STRENGTH | : 195 MPa (Min) |
| TENSILE STRENGTH | : 320-520 MPa |
| ELONGATION | : 20% (Min) on Gauge Length 5.65 x Sq. Root of Cross Sectional Area |

CHEMICAL PROPERTIES

| % C (Max) | % Mn (Max) | % P (Max) | % S (Max) |
|-----------|------------|-----------|-----------|
| 0.2 | 1.40 | 0.035 | 0.03 |

BEND TEST : : For sizes 2" and below

| Diameter D | 21.3 | 26.9 | 33.7 | 42.4 | 48.3 | 60.3 |
|----------------|------|------|------|------|------|------|
| Bending Radius | 65 | 85 | 100 | 150 | 170 | 220 |

Note-Weld shall be placed at 90° to the plane of bending.

FLATTENING TEST : For sizes above 2" in Two Stages

- A. For Weld Test : Flatten upto 75% of Original Tube OD
- B. For Material other than Weld : Flatten upto 60% of Original Tube OD

| | | |
|----------------------------|---|--|
| LEAK TIGHTNESS TEST | : | 100% Hydrotesting at 50 Bar OR On-Line Eddy Current (NDT) Test |
| END FINISH | : | Plain End / Screwed & Socketed |
| GALVANIZING | : | As per EN 10240 |
| BLACK PAINTING | : | Uniform Black Paint Coating |
| THREADING | : | As per EN 10226 - 1 / 2 |

COLOUR CODING :

| Series / Type | Medium | Heavy | L | L1 | L2 |
|---------------|--------|-------|-------|-------|-------|
| Colour Code | Blue | Red | Green | White | Brown |

STENCILING : Each Pipe shall be Stenciled with
" ITC JORDAN -W-EN 10255-SERIES/TYPE-SIZE-LENGTH"

TECHNICAL DATA FOR METAL SCAFFOLDING AS PER SPECIFICATION BS EN 39 : 2001

| Outside Diameter | | Thickness | | Weight per unit length | |
|------------------|------|-----------|-----|------------------------|--------|
| Inches | mm | Inches | mm | lbs/foot | kg / m |
| 1.1/2 | 48.3 | 0.126 | 3.2 | 2.392 | 3.56 |
| 1.1/2 | 48.3 | 0.157 | 4.0 | 2.937 | 4.37 |

TOLERANCES

| Outside Diameter | Thickness | Weight |
|------------------|-----------|----------------------|
| + 0.5mm | -10% | -7.5% On Single Tube |

STEEL GRADE

: S235GT

CHEMICAL COMPOSITION

| % C (Max) | % Si (Max) | % Mn (Max) | % P (Max) | % S (Max) | % Al (Max) |
|-----------|------------|------------|-----------|-----------|------------|
| 0.2 | 0.05 | 1.4 | 0.04 | 0.045 | 0.02 |

MECHANICAL PROPERTIES

YIELD STRENGTH

: 235 MPa (Min)

TENSILE STRENGTH

: 340-520 Mpa

ELONGATION

: 24% (Min) on Gauge Length
5.65 x sq. root of gross sectional area

END FINISH

: Square Cut

STRAIGHTNESS

: 1 mm in 500 mm length.

FLATTENING TEST

a. For Weld Test

: Flatten upto 75% of Original Tube OD

b. For Material other than Weld

: Flatten upto 60% of Original Tube OD

ZINC COATING

: 40 Microns Minimum Outside

MARKING

: "EN 39 AJSP 3" for 3.2mm

"EN 39 AJSP 4" for 4.0mm

DELIVERY CONDITIONS

a. As Rolled Condition (Without Protection)

b. Hot Dip Galvanized

TECHNICAL DATA OF BLACK AND HOT DIP GALVANIZED STEEL PIPES CONFORMING TO ISO 65-1981 FOR FABRICATION AND SHAPING BY NATURAL TECHNIQUES

| CLASS | NOMINAL PIPE SIZE | | OUTSIDE DIAMETER | | WALL THICKNESS | | PLAIN END PIPES | | WEIGHT OF BLACK PIPES | | SCREWED AND SOCKETED PIPES | | NO OF PIECES | | | | |
|-----------|-------------------|-------|------------------|---------|----------------|--------|-----------------|--------|-----------------------|--------|----------------------------|--------|--------------|---------|--------|----------|------|
| | INCH | MM | MINIMUM | MAXIMUM | INCH | MM | MTR/TON | FT/TON | KG/MTR | FT/TON | MTR/TON | FT/TON | KG/MTR | MTR/TON | FT/TON | PER LIFT | |
| LIGHT - 1 | 1/2 | 15 | 0.827 | 21.00 | 0.854 | 21.70 | 0.091 | 2.30 | 1.08 | 926 | 0.726 | 3038 | 1.09 | 917 | 0.732 | 3010 | 130 |
| | 3/4 | 20 | 1.039 | 26.40 | 1.067 | 27.10 | 0.091 | 2.30 | 1.39 | 719 | 0.934 | 2360 | 1.40 | 714 | 0.941 | 2343 | 100 |
| | 1 | 25 | 1.307 | 33.20 | 1.339 | 34.00 | 0.114 | 2.90 | 2.20 | 455 | 1.478 | 1491 | 2.22 | 450 | 1.492 | 1478 | 65 |
| | 1.1/4 | 32 | 1.650 | 41.90 | 1.681 | 42.70 | 0.114 | 2.90 | 2.82 | 355 | 1.895 | 1163 | 2.85 | 351 | 1.915 | 1151 | 51 |
| | 1.1/2 | 40 | 1.882 | 47.80 | 1.913 | 48.60 | 0.114 | 2.90 | 3.24 | 309 | 2.177 | 1013 | 3.28 | 305 | 2.204 | 1000 | 44 |
| | 2 | 50 | 2.346 | 59.60 | 2.390 | 60.70 | 0.126 | 3.20 | 4.49 | 223 | 3.017 | 731 | 4.56 | 219 | 3.064 | 719 | 30 |
| | 2.1/2 | 65 | 2.961 | 75.20 | 3.004 | 76.30 | 0.126 | 3.20 | 5.73 | 175 | 3.850 | 573 | 5.85 | 171 | 3.931 | 561 | 24 |
| | 3 | 80 | 3.461 | 87.90 | 3.520 | 89.40 | 0.142 | 3.60 | 7.95 | 132 | 5.073 | 435 | 7.72 | 130 | 5.188 | 425 | 19 |
| | 4 | 100 | 4.449 | 113.00 | 4.524 | 114.90 | 0.157 | 4.00 | 10.80 | 93 | 7.257 | 304 | 11.10 | 90 | 7.459 | 296 | 14 |
| | 1/2 | 15 | 0.827 | 21.00 | 0.843 | 21.40 | 0.079 | 2.00 | 0.95 | 1056 | 0.636 | 3464 | 0.96 | 1046 | 0.642 | 3432 | 160 |
| LIGHT - 2 | 3/4 | 20 | 1.039 | 26.40 | 1.059 | 26.90 | 0.091 | 2.30 | 1.38 | 725 | 0.927 | 2377 | 1.39 | 719 | 0.904 | 2360 | 110 |
| | 1 | 25 | 1.307 | 33.20 | 1.331 | 33.80 | 0.102 | 2.60 | 1.98 | 505 | 1.330 | 1657 | 2.00 | 500 | 1.344 | 1640 | 80 |
| | 1.1/4 | 32 | 1.650 | 41.90 | 1.673 | 42.50 | 0.102 | 2.60 | 2.54 | 394 | 1.707 | 1292 | 2.57 | 389 | 1.727 | 1277 | 61 |
| | 1.1/2 | 40 | 1.882 | 47.80 | 1.906 | 48.40 | 0.114 | 2.90 | 3.23 | 310 | 2.170 | 1016 | 3.27 | 306 | 2.197 | 1003 | 51 |
| | 2 | 50 | 2.346 | 59.60 | 2.370 | 60.20 | 0.114 | 2.90 | 4.08 | 245 | 2.742 | 804 | 4.15 | 241 | 2.789 | 791 | 37 |
| | 2.1/2 | 65 | 2.961 | 75.20 | 2.992 | 76.00 | 0.126 | 3.20 | 5.71 | 175 | 3.837 | 575 | 5.83 | 172 | 3.918 | 563 | 27 |
| | 3 | 80 | 3.461 | 87.90 | 3.492 | 88.70 | 0.126 | 3.20 | 6.72 | 149 | 4.516 | 488 | 6.89 | 145 | 4.630 | 476 | 24 |
| | 4 | 100 | 4.449 | 113.00 | 4.484 | 113.90 | 0.142 | 3.60 | 9.75 | 103 | 6.552 | 336 | 10.00 | 100 | 6.720 | 328 | 16 |
| | 1/2 | 15 | 0.827 | 21.00 | 0.858 | 21.80 | 0.102 | 2.60 | 1.21 | 826 | 0.813 | 2711 | 1.22 | 820 | 0.820 | 2689 | 130 |
| | MEDIUM | 3/4 | 20 | 1.043 | 26.50 | 1.075 | 27.30 | 0.102 | 2.60 | 1.56 | 641 | 1.048 | 2103 | 1.57 | 637 | 1.055 | 2090 |
| 1 | | 25 | 1.311 | 33.30 | 1.346 | 34.20 | 0.126 | 3.20 | 2.41 | 415 | 1.619 | 1361 | 2.43 | 412 | 1.633 | 1350 | 65 |
| 1.1/4 | | 32 | 1.654 | 42.00 | 1.689 | 42.90 | 0.126 | 3.20 | 3.10 | 323 | 2.083 | 1058 | 3.13 | 319 | 2.103 | 1048 | 51 |
| 1.1/2 | | 40 | 1.886 | 47.90 | 1.921 | 48.80 | 0.126 | 3.20 | 3.56 | 281 | 2.392 | 922 | 3.60 | 278 | 2.419 | 911 | 44 |
| 2 | | 50 | 2.350 | 59.70 | 2.394 | 60.60 | 0.142 | 3.60 | 5.03 | 199 | 3.380 | 652 | 5.10 | 196 | 3.427 | 643 | 30 |
| 2.1/2 | | 65 | 2.965 | 75.30 | 3.016 | 76.60 | 0.142 | 3.60 | 6.42 | 156 | 4.314 | 511 | 6.54 | 153 | 4.395 | 502 | 24 |
| 3 | | 80 | 3.465 | 88.00 | 3.524 | 89.50 | 0.157 | 4.00 | 8.36 | 120 | 5.618 | 392 | 8.53 | 117 | 5.732 | 385 | 19 |
| 4 | | 100 | 4.453 | 113.10 | 4.528 | 115.00 | 0.177 | 4.50 | 12.20 | 82 | 8.198 | 269 | 12.50 | 80 | 8.400 | 262 | 14 |
| 5 | | 125 | 5.453 | 138.50 | 5.543 | 140.80 | 0.197 | 5.00 | 16.60 | 60 | 11.155 | 198 | 17.10 | 58 | 11.491 | 192 | 10 |
| 6 | | 150 | 6.453 | 163.90 | 6.555 | 166.50 | 0.197 | 5.00 | 19.80 | 51 | 13.305 | 166 | 20.40 | 49 | 13.708 | 161 | 7 |
| HEAVY | 1/2 | 15 | 0.827 | 21.00 | 0.858 | 21.80 | 0.126 | 3.20 | 1.44 | 694 | 0.968 | 2278 | 1.45 | 690 | 0.974 | 2263 | 110 |
| | 3/4 | 20 | 1.043 | 26.50 | 1.075 | 27.30 | 0.126 | 3.20 | 1.87 | 535 | 1.257 | 1754 | 1.88 | 532 | 1.263 | 1745 | 80 |
| | 1 | 25 | 1.311 | 33.30 | 1.346 | 34.20 | 0.157 | 4.00 | 2.93 | 341 | 1.969 | 1120 | 2.95 | 339 | 1.982 | 1112 | 55 |
| | 1.1/4 | 32 | 1.654 | 42.00 | 1.689 | 42.90 | 0.157 | 4.00 | 3.79 | 264 | 2.547 | 866 | 3.82 | 262 | 2.567 | 859 | 44 |
| | 1.1/2 | 40 | 1.886 | 47.90 | 1.921 | 48.80 | 0.157 | 4.00 | 4.37 | 229 | 2.937 | 751 | 4.41 | 227 | 2.963 | 744 | 37 |
| | 2 | 50 | 2.350 | 59.70 | 2.394 | 60.60 | 0.177 | 4.50 | 6.19 | 162 | 4.159 | 530 | 6.26 | 160 | 4.207 | 524 | 27 |
| | 2.1/2 | 65 | 2.965 | 75.30 | 3.016 | 76.60 | 0.177 | 4.50 | 7.93 | 126 | 5.329 | 414 | 8.05 | 124 | 5.409 | 408 | 20 |
| | 3 | 80 | 3.465 | 88.00 | 3.524 | 89.50 | 0.197 | 5.00 | 10.30 | 97 | 6.921 | 319 | 10.50 | 95 | 7.056 | 312 | 16 |
| | 4 | 100 | 4.453 | 113.10 | 4.528 | 115.00 | 0.213 | 5.40 | 14.50 | 69 | 9.744 | 226 | 14.80 | 68 | 9.945 | 222 | 12 |
| | 5 | 125 | 5.453 | 138.50 | 5.543 | 140.80 | 0.213 | 5.40 | 17.90 | 56 | 12.028 | 183 | 18.40 | 54 | 12.364 | 178 | 10 |
| 6 | 150 | 6.453 | 163.90 | 6.555 | 166.50 | 0.213 | 5.40 | 21.30 | 47 | 14.313 | 154 | 21.90 | 46 | 14.716 | 150 | 7 | |

TECHNICAL DATA

TOLERANCES

| CLASS | THICKNESS | WEIGHT/PIECE | WEIGHT / 10 MT |
|---------|-----------|--------------|----------------|
| LIGHT 1 | -12.50% | + / - 10.0% | + / - 7.5% |
| LIGHT 2 | -8.00% | -8.0/+10.0% | + / - 5.0% |
| MEDIUM | -12.50% | + / - 10.0% | + / - 7.5% |
| HEAVY | -12.50% | + / - 10.0% | + / - 7.5% |

CHEMICAL PROPERTIES

PHOSPHORUS : 0.060% MAX

SULPHUR : 0.060% MAX

MECHANICAL PROPERTIES

TENSILE STRENGTH : 320-520 N/MM²

ELONGATION : 15% MIN on GL 5.65xSq. Root of Cross Sectional Area

LEAK TIGHTNESS TEST

All pipes shall be tested hydrostatically at a pressure of 50 bar OR shall be 100% on-line eddy current tested.

MARKING

Each pipes is stenciled with " ITC JORDAN - DN SIZE -SERIES- ISO 65"

PACKING : Hexagonal Type

PRODUCTS

BLACK PIPES

Dimensions and Weight for Structural Round Pipes

| Inch | Diameter | Thickness (mm) | | | | | | | | | | | | | | | | |
|--------|----------|----------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|
| | | 0.6 | 0.7 | 0.8 | 0.9 | 1 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.8 | 2 | 3 | 4 | 5 | 6 |
| | | Weight (kg/m) | | | | | | | | | | | | | | | | |
| 1/2" | 21 | 0.31 | 0.37 | 0.42 | 0.47 | 0.52 | 0.58 | 0.63 | 0.68 | 0.73 | 0.79 | 0.84 | 0.94 | 1.05 | - | - | - | - |
| 3/4" | 27 | 0.40 | 0.47 | 0.48 | 0.61 | 0.67 | 0.74 | 0.81 | 0.88 | 0.94 | 1.01 | 1.08 | 1.21 | 1.35 | - | - | - | - |
| 1" | 32 | 0.48 | 0.56 | 0.64 | 0.82 | 0.80 | 0.88 | 0.96 | 1.04 | 1.12 | 1.20 | 1.28 | 1.44 | 1.60 | - | - | - | - |
| 1.1/4" | 42 | 0.63 | 0.74 | 0.84 | 0.95 | 1.05 | 1.16 | 1.26 | 1.37 | 1.47 | 1.58 | 1.68 | 1.89 | 2.10 | - | - | - | - |
| 1.1/2" | 48 | 0.72 | 0.84 | 0.96 | 1.08 | 1.20 | 1.32 | 1.44 | 1.56 | 1.68 | 1.80 | 1.92 | 2.16 | 2.40 | 3.60 | - | - | - |
| 2" | 60 | - | - | - | - | - | - | - | - | 2.10 | 2.25 | 2.40 | 2.70 | 3.00 | 4.50 | - | - | - |
| 2.1/2" | 76 | - | - | - | - | - | - | - | - | 2.66 | 2.85 | 3.04 | 3.42 | 3.80 | 5.70 | 7.60 | 9.50 | 11.40 |
| 3" | 89 | - | - | - | - | - | - | - | - | 3.08 | 3.30 | 3.52 | 3.96 | 4.40 | 6.60 | 8.80 | 11.00 | 13.20 |
| 4" | 114 | - | - | - | - | - | - | - | - | 3.98 | 4.26 | 4.54 | 5.11 | 5.68 | 8.52 | 11.36 | 14.20 | 17.04 |
| 5" | 140 | - | - | - | - | - | - | - | - | 4.91 | 5.27 | 5.62 | 6.32 | 7.02 | 10.53 | 14.04 | 17.55 | 21.06 |
| 6" | 165 | - | - | - | - | - | - | - | - | 5.77 | 6.18 | 6.59 | 7.42 | 8.24 | 12.36 | 16.48 | 20.60 | 24.72 |



SQUARES

Dimensions and Weight for Structural Square Tubes

| Size | Thickness (mm) | | | | | | | | | | | Weight (kg/m) | | | | | | | |
|---------|----------------|------|------|------|------|------|------|------|------|------|------|---------------|------|------|------|-------|-------|-------|-------|
| | 0.5 | 0.6 | 0.7 | 0.8 | 0.8 | 0.9 | 1 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.8 | 2 | 3 | 4 | 5 | 6 |
| 16*16 | 0.25 | 0.30 | 0.35 | 0.40 | 0.40 | 0.45 | 0.50 | 0.55 | 0.60 | 0.65 | 0.70 | 0.75 | 0.80 | 0.90 | 1.00 | - | - | - | - |
| 19*19 | 0.30 | 0.36 | 0.42 | 0.48 | 0.48 | 0.54 | 0.60 | 0.66 | 0.72 | 0.78 | 0.84 | 0.89 | 0.95 | 1.07 | 1.19 | - | - | - | - |
| 25*25 | 0.39 | 0.47 | 0.55 | 0.63 | 0.63 | 0.71 | 0.79 | 0.86 | 0.94 | 1.02 | 1.10 | 1.18 | 1.26 | 1.41 | 1.57 | - | - | - | - |
| 30*30 | 0.47 | 0.57 | 0.66 | 0.75 | 0.75 | 0.85 | 0.94 | 1.04 | 1.13 | 1.22 | 1.32 | 1.41 | 1.51 | 1.70 | 1.88 | - | - | - | - |
| 40*40 | 0.63 | 0.75 | 0.88 | 1.00 | 1.00 | 1.13 | 1.26 | 1.38 | 1.51 | 1.63 | 1.76 | 1.88 | 2.01 | 2.26 | 2.51 | - | - | - | - |
| 50*50 | - | - | - | - | - | - | 1.57 | 1.73 | 1.88 | 2.04 | 2.20 | 2.36 | 2.51 | 2.83 | 3.14 | - | - | - | - |
| 60*60 | - | - | - | - | - | - | 1.88 | 2.07 | 2.26 | 2.45 | 2.64 | 2.83 | 3.01 | 3.39 | 3.77 | - | - | - | - |
| 80*80 | - | - | - | - | - | - | - | - | - | 3.27 | 3.52 | 3.77 | 4.02 | 4.52 | 5.02 | 7.54 | 10.05 | 12.56 | 15.07 |
| 100*100 | - | - | - | - | - | - | - | - | - | 4.08 | 4.40 | 4.71 | 5.02 | 5.65 | 6.28 | 9.42 | 12.56 | 15.70 | 18.84 |
| 120x120 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6.65 | 11.47 | 16.30 | 19.13 | 22.94 |



PRODUCTS

RECTANGULARS

Dimensions and Weight for Structural Rectangular

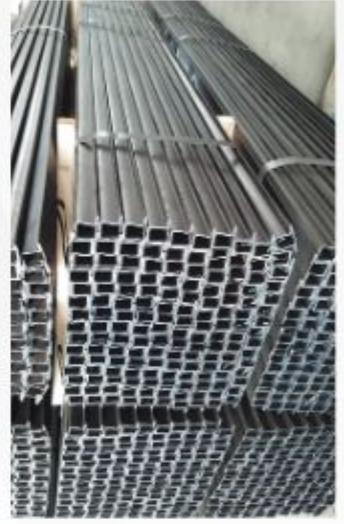
| Size | Thickness (mm) | | | | | | | | | | | | | | | | | |
|--------|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|
| | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.8 | 2 | 3 | 4 | 5 | 6 |
| | Weight (kg/m) | | | | | | | | | | | | | | | | | |
| 40*20 | 0.47 | 0.57 | 0.66 | 0.75 | 0.85 | 0.94 | 1.04 | 1.13 | 1.22 | 1.32 | 1.41 | 1.51 | 1.70 | 1.88 | - | - | - | - |
| 50*25 | 0.59 | 0.71 | 0.82 | 0.94 | 1.06 | 1.18 | 1.29 | 1.41 | 1.53 | 1.65 | 1.77 | 1.88 | 2.12 | 2.35 | - | - | - | - |
| 60*30 | 0.71 | 0.85 | 0.99 | 1.13 | 1.27 | 1.41 | 1.55 | 1.70 | 1.84 | 1.98 | 2.12 | 2.26 | 2.54 | 2.83 | - | - | - | - |
| 80*40 | - | - | 1.32 | 1.51 | 1.70 | 1.88 | 2.07 | 2.26 | 2.45 | 2.64 | 2.83 | 3.01 | 3.39 | 3.77 | 5.65 | 7.54 | - | - |
| 100*50 | - | - | - | - | - | - | - | - | 3.06 | 3.30 | 3.53 | 3.77 | 4.24 | 4.71 | 7.07 | 9.42 | 11.78 | 14.13 |
| 120*80 | - | - | - | - | - | - | - | - | - | - | - | - | - | 6.39 | 9.55 | 12.74 | 15.92 | 19.10 |
| 150*90 | - | - | - | - | - | - | - | - | - | - | - | - | - | 7.65 | 11.47 | 15.30 | 19.12 | 22.94 |



HELLOW SECTIONS

S41, S42, S43, S44, S26, S27, S28

In Thickness as customers request



WEIGHT BRIDGE

ITC have 2 Weight Bridges to ensure systematic monitoring of Incoming and outgoing material.



MAINTENANCE

ITC has an In-house Maintenance team and fully equipment workshop to handle all preventive and breakdown activities; this ensures breakdowns are handled without loss of time to ensure best quality and reliability in deliveries.

SPARE PARTS STORES

ITC Maintains stocks of all Consumables and Spares which may be required to ensure continuous and uninterrupted production.



STORAGE AREA



APPLICATION

| | | |
|---|-----------------------------|---|
|  | AGRICULTURE, IRRIGATION | |
| | AGRICULTURE, IRRIGATION |  |
|  | BUILDING CONSTRUCTION | |
| | FENCING |  |
|  | FURNITURE | |
| | GREEN HOUS |  |
|  | HAND RAILING & STRUCTURAL | |
| | OIL FIELD |  |
|  | INDUSTRIAL STRUCTURE | |
| | OIL REFINERY |  |
|  | CONSTRUCTION OF BRIDGES | |
| | ELECTRICAL CONDUITES |  |
|  | SHIP BUILDING YARDS | |
| | TUBULAR POLES |  |
|  | ENGINEERING GENERAL PURPOSE | |



**Wire & Tube Fair 2018
Dusseldorf Germany**



**Big 5 Jeddah
KSA 2018**



BIG 5 Dubai 2019 UAE



Big 5 Kenya 2019



Big 5 Riyadh KSA 2022



Big 5 Riyadh KSA 2023



Big 5 Riyadh KSA 2024



**Baghdad International Fair
Baghdad - Iraq 2024**





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