



鼎联国际集团



UNIONLEVER INTERNATIONAL GROUP

www.unionlever.com sales@unionlever.com

Ductile Iron Pipe

Ductile Iron Pipe Fitting

Ductile Iron Manhole Cover



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Ductile Iron Pipe

1. Ductile Iron Pipe

Ductile Cast Iron Pipe is the most widely-used pipeline product in water supply and water drain/sewage projects. Our D.I. pipe ranges from DN80-DN1600mm (Tyton, K8/K9 class), effective length:6m or 5.7m, comply with standard EN545/ISO2531/BS4772.



1. Technical Data

T Type Centrifugation DIP (Level K9, Effective Length: 6m)

| Nominal Diameter | Outside Diameter | Wall Thickness | Approximate Weight of Socket Kg | Weight of Straight Section Kg/m | Weight of Standard Working Length Kg/Length | Number of Pipes Per Mile | Pipe weight Per Mile (Tons) |
|------------------|------------------|----------------|---------------------------------|---------------------------------|---|--------------------------|-----------------------------|
| 80 | 98 | 6.0 | 3.4 | 12.2 | 76.5 | 167 | 12.770 |
| 100 | 118 | 6.0 | 4.3 | 15.1 | 95 | 167 | 15.865 |
| 150 | 170 | 6.0 | 7.1 | 22.8 | 144 | 167 | 20.048 |
| 200 | 220 | 6.3 | 10.3 | 30.6 | 194 | 167 | 32.398 |
| 250 | 274 | 6.8 | 14.2 | 40.2 | 255 | 167 | 42.585 |
| 300 | 326 | 7.2 | 18.6 | 50.8 | 323 | 167 | 53.941 |
| 350 | 378 | 7.7 | 23.7 | 63.2 | 403 | 167 | 67.301 |
| 400 | 429 | 8.1 | 29.3 | 75.5 | 482 | 167 | 80.484 |
| 450 | 480 | 8.6 | 38.3 | 89.3 | 574 | 167 | 95.858 |
| 500 | 532 | 9.0 | 42.8 | 104.3 | 669 | 167 | 111.723 |
| 600 | 635 | 9.9 | 59.3 | 137.3 | 882 | 167 | 147.294 |
| 700 | 738 | 10.8 | 79.1 | 173.9 | 1123 | 167 | 187.541 |
| 800 | 842 | 11.7 | 102.6 | 215.2 | 1394 | 167 | 232.798 |
| 900 | 945 | 12.6 | 129.6 | 260.2 | 1691 | 167 | 282.397 |
| 1000 | 1048 | 13.5 | 161.3 | 309.3 | 2017 | 167 | 336.839 |
| 1100 | 1152 | 14.4 | 194.7 | 362.8 | 2372 | 167 | 396.124 |
| 1200 | 1255 | 15.3 | 237.7 | 420.1 | 2758 | 167 | 460.586 |

Ductile Iron Pipe

2. Chemical Composition Comparative Statement

| Chemical Composition Comparative Statement | | | |
|--|-------------|-------------|---------------|
| chemical composition (%) | DIP | Steel Pipe | Gray Pig Iron |
| (C) | 3.5 - 4.0 | 0.1 - 0.2 | 3.2 - 3.8 |
| (Si) | 1.9 - 2.6 | 0.15 - 0.4 | 1.4 - 2.2 |
| (Mn) | 0.15 - 0.45 | 0.3 - 0.6 | 0.4 - 0.6 |
| (P) | 0.06 | 0.02 - 0.03 | 0.3 |
| (S) | 0.02 | 0.02 - 0.03 | 0.1 |
| (Mg) | 0.03 - 0.06 | - | - |

3. Pipe Anti-corrosion Comparative Statement under the Affect of Drinking Water

| Pipe Anti - corrosion Comparative Statement under the Affect of Drinking Water | | |
|--|---------------------------------|---------------|
| Pipe Kinds | Corrosion (gr/cm ²) | |
| | After 45 days | After 90 days |
| DIP | 0.006 | 0.009 |
| Grey Iron Pipe | 0.006 | 0.0103 |
| Seamless Steel Pipe | 0.017 | 0.0273 |
| Welded Steel Pipe | 0.0294 | 0.0396 |

4. Machinery Property

| Machinery Property | | | | |
|---------------------------------------|--------------------|--------------------------|--------------------|------------|
| | DIP (Annealing) | DIP (Non - Annealing) | Gray pig iron pipe | Steel pipe |
| Tensile strength (N/mm ²) | 420 | | 150 - 260 | 400 |
| Bending strength(N/mm ²) | 590 | 300 | 200 - 300 | 400 |
| Extensibility (%) | 10 | 3-5 | Neglect | 18 |
| Hardness(HB) | 230 | | 210 | about 140 |
| Hydraulic Testing Pressure(Mpa) | DN300 | 50 | | |
| | DN350 - 600 | 40 | | |
| | DN700 - 1000 | 32 | | 2.5 - 3.0 |
| Gas Leakage Test Pressure(Mpa) | 0.3 | | | |

Ductile Iron Pipe Fitting

2. Ductile Iron Pipe Fitting

DIP fittings are the mating products for DIP with the specifications of DN 100mm-DN 1200mm. The products are widely used in various DIP. Pipe fitting surface shall be smooth and free from sand holes, blow holes, distortion or any other defects. They comply with EN 545 and ISO 2531 standard.

Ductile Iron Pipe Fitting



Mechanical Properties of Ductile Iron Pipe Fitting

| Standard | Nominal Diameter DN mm | Tensile Strength N /mm ² | Ticld Strength N /mm ² | Elongation % | Hardness HB | Minumum Test Working Pressure bar | Airtight Test bar |
|--------------------|-----------------------------|--|--------------------------------------|-----------------|----------------|--------------------------------------|----------------------|
| ISD2531 BSEN545 | ≤300 350-600 700-1200 | ≤420 | ≤300 | ≤5 | ≤250 | 25 16 10 | 6 6 6 |

Name and Symbols

| Item No. | Name | Symbaols |
|----------|---|----------|
| 1 | Flanged Spigot | ⌋ |
| 2 | Collar | ⌋⌋ |
| 3 | Flanged Socket | ⌋⌋⌋ |
| 4 | Flanged Socket | ⌋⌋⌋ |
| 5 | Socket Spigot | ⌋⌋ |
| 6 | Blank Flange | ⌋ |
| 7 | Double Socket Bend | ⌋⌋ |
| 8 | Socket Spigot Bend | ⌋⌋ |
| 9 | Double Flanged Bend | ⌋⌋ |
| 10 | Double Socket Taper | ⌋⌋ |
| 11 | Double Flanged Taper | ⌋⌋ |
| 12 | Double Sucket Taper | ⌋⌋ |
| 13 | All Flanged Tee | ⌋⌋⌋ |
| 14 | All Sucket Tee | ⌋⌋⌋ |
| 15 | Socket And Spigot Tecs With Socket Branch | ⌋⌋⌋ |
| 16 | Socket And Spigot Tecs With Flanged Branch | ⌋⌋⌋ |
| 17 | Double Socket Level Invert Tees With Flanged Branch | ⌋⌋⌋ |
| 18 | Double Socket Level Invert Tees | ⌋⌋⌋ |
| 19 | All Socket Tee With 45° Angle Branch | ⌋⌋⌋ |
| 20 | All Flanged Tee With 45° Angle Branch | ⌋⌋⌋ |
| 21 | Double Flanged 90° Duckfoot Bend | ⌋⌋ |
| 22 | Double Socket Off Set | ⌋⌋ |
| 23 | All Flanged Cross | ⌋⌋⌋ |
| 24 | All Socket Cross | ⌋⌋⌋ |
| 25 | Cap | ⌋ |
| 26 | Plug | ⌋ |
| 27 | Double Flanged Pipe | ⌋⌋ |
| 28 | Flanged Adaptor | ⌋⌋ |
| 29 | Coupling | ⌋⌋ |
| 30 | Flange | ⌋ |

3.Ductile Iron Manhole Cover

The ductile iron manhole tops are largely used in the construction of city project inside or abroad the country. Such as the road, park, square. They also apply for drainage engineering, power supply project and telecom communication project.

A complete range of the innovative channel drainage systems cover all application types from domestic usage through to industrial, dock or airport usage.

Ductile Iron manhole covers are manufactured to BS EN124.

Our factory can design the drawing according to the customers' description to meet their need. Also they can produce according to the drawing which customer supplied. The following is that we supplied according to our customers' request

Appropriate class of manhole top or gully grating depends upon the place of installation (according to European standard en 124:1994)

1. Class A 15 (test load > 15 kN): A24 areas which can only be used by pedestrians and pedal cyclist;
2. Class B 125 (test load > 125 kN): footways, pedestrian areas and comparable areas, car parks or car parking decks;
3. Class C 250 (test load > 250 kN): for gully tops installed in the area of kerbside channels of roads which when measured from the kerb edge, extend a maximum of 0,5 m into the carriageway and a maximum of 0,2 m into the footway;
4. Class D 400 (test load > 400 kn): carriageways of roads (including pedestrian streets) hard shoulders and parking areas for all types of road vehicles.
5. Class E600: Areas imposing high wheel loads, e.g. docks, aircraft pavements.
6. Class F900: Areas imposing particularly high wheel loads, e.g. aircraft pavements.

1.Round manhole cover



| specification(mm) | Specification(mm) | Specification(mm) |
|-------------------|-------------------|-------------------|
| 330×100 | 815×100 | 815×55 |

2.Square manhole cover



| Specification(mm) | Specification(mm) | Specification(mm) |
|-------------------|-------------------|-------------------|
| 300×300×40 | 600×600×100 | 1000×1000×100 |
| 400×400×45 | 700×700×100 | 1100×1100×100 |
| 500×500×50 | 800×800×100 | 1200×1200×100 |
| 500×500×100 | 900×900×100 | |
| 550×550×100 | 905×905×100 | |

3.Rectangular manhole cover



| specification (mm) | specification (mm) |
|--------------------|--------------------|
| 600×800×150 | 600×800×100 |
| 600×800×60 | |

4.Double triangle manhole cover



| Specification(mm) | specification(mm) | Specification(mm) |
|-------------------|-------------------|-------------------|
| 600×450×100 | 675×675×100 | 750×750×100 |
| 600×600×100 | 675×675×150 | 900×600×100 |
| 600×600×150 | 750×600×100 | 900×900×100 |