

**S.C. T.M.K. - ARTROM S.A.**

Draganesti Street , No. 30, 230119, SLATINA, OLT, ROMANIA  
 Tel: +40-249-436862,434640,434641; Fax: +40-249-434330; 437288 ; 431144  
 E-mail: office.slatina@tmk-artrom.ro; www.tmk-artrom.ro  
 J 28/9/1991; VAT No: RO 1510210/1992;  
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**LINE PIPE WITH PLAIN ENDS****1. Standards**

API Spec 5L, ASTM A 53, SR EN 10208 -1

**2. Used for:**

- construction of long distance Pipe Lines for combustible liquids and gases;
- conveying gas and oil; in oil and natural gas industries.

**3. Dimensions**

According Tab.1 and Tab. 2

**Tab.1 Dimensions - Line pipe HOT ROLLING ASSEL MILL**

| Nominal | OD    |       | WT    |       | Weight |        | L max |      | Identification |            |      |
|---------|-------|-------|-------|-------|--------|--------|-------|------|----------------|------------|------|
|         | in    | mm    | in    | mm    | lb/ft  | kg/m   | ft    | m    | API            | STD/XS/XXS | Sch. |
| 2 1/2   | 2.874 | 73    | 0.375 | 9.53  | 10.02  | 14.92  | 26.2  | 8    |                |            | 160  |
|         |       |       | 0.552 | 14.02 | 13.70  | 20.39  | 26.2  | 8    | 5L             | XXS        |      |
| 3       | 3.500 | 88.9  | 0.438 | 11.13 | 14.34  | 21.35  | 26.2  | 8    |                |            | 160  |
|         |       |       | 0.600 | 15.24 | 18.60  | 27.68  | 26.2  | 8    | 5L             | XXS        |      |
| 4       | 4.500 | 114.3 | 0.438 | 11.13 | 16.68  | 28.32  | 36.1  | 11   | 5L             |            | 120  |
|         |       |       | 0.531 | 13.49 | 19.69  | 33.54  | 32.8  | 10   | 5L             |            | 160  |
|         |       |       | 0.674 | 17.12 | 23.96  | 41.03  | 27.9  | 8.5  | 5L             | XXS        |      |
| 5       | 5.563 | 141.3 | 0.258 | 6.55  | 10.32  | 21.77  | 40.0  | 12.2 | 5L             | STD        | 40   |
|         |       |       | 0.281 | 7.14  | 11.17  | 23.62  | 40.0  | 12.2 | 5L             |            |      |
|         |       |       | 0.312 | 7.92  | 12.30  | 26.05  | 39.4  | 12   | 5L             |            |      |
|         |       |       | 0.344 | 8.74  | 13.44  | 28.57  | 39.4  | 12   | 5L             |            |      |
|         |       |       | 0.375 | 9.53  | 14.53  | 30.97  | 36.1  | 11   | 5L             | XS         | 80   |
|         |       |       | 0.500 | 12.70 | 18.71  | 40.28  | 32.8  | 10   | 5L             |            | 120  |
|         |       |       | 0.625 | 15.88 | 22.55  | 49.12  | 29.5  | 9    | 5L             |            | 160  |
|         |       |       | 0.750 | 19.50 | 26.06  | 58.57  | 26.2  | 8    | 5L             | XXS        |      |
| 6       | 6.625 | 168.3 | 0.280 | 7.11  | 11.13  | 28.26  | 40.0  | 12.2 | 5L             | STD        | 40   |
|         |       |       | 0.312 | 7.92  | 12.30  | 31.33  | 39.4  | 12   | 5L             |            |      |
|         |       |       | 0.344 | 8.74  | 13.44  | 34.39  | 37.7  | 11.5 | 5L             |            |      |
|         |       |       | 0.375 | 9.53  | 14.53  | 37.31  | 36.1  | 11   | 5L             |            |      |
|         |       |       | 0.432 | 10.97 | 16.48  | 42.56  | 36.1  | 11   | 5L             | XS         | 80   |
|         |       |       | 0.500 | 12.70 | 18.71  | 48.73  | 32.8  | 10   | 5L             |            |      |
|         |       |       | 0.562 | 14.27 | 20.65  | 54.21  | 29.5  | 9    | 5L             |            | 120  |
|         |       |       | 0.625 | 15.88 | 22.55  | 59.69  | 27.9  | 8.5  | 5L             |            |      |
|         |       |       | 0.719 | 18.26 | 25.22  | 67.57  | 26.2  | 8    | 5L             |            | 160  |
|         |       |       | 0.750 | 19.05 | 26.06  | 70.12  | 26.2  | 8    | 5L             |            |      |
|         |       |       | 0.864 | 21.95 | 28.96  | 79.22  | 26.2  | 8    |                | XXS        |      |
|         |       |       | 0.875 | 22.23 | 29.23  | 80.08  | 26.2  | 8    | 5L             |            |      |
| 8       | 8.625 | 219.1 | 0.719 | 18.26 | 25.22  | 90.44  | 27.9  | 8.5  | 5L             |            | 120  |
|         |       |       | 0.750 | 19.05 | 26.06  | 93.98  | 27.9  | 8.5  | 5L             |            |      |
|         |       |       | 0.812 | 20.62 | 27.67  | 100.93 | 27.9  | 8.5  | 5L             |            | 140  |
|         |       |       | 0.875 | 22.23 | 29.23  | 107.93 | 27.9  | 8.5  | 5L             | XXS        |      |
|         |       |       | 0.906 | 23.01 | 29.97  | 111.27 | 27.9  | 8.5  |                |            | 160  |
|         |       |       | 1.000 | 25.40 | 32.07  | 121.33 | 26.2  | 8    | 5L             |            |      |

- Note:**
1. For sizes with OD/WT > 12.5 it is necessary to consult the supplier at ordering time.
  2. Lengths: 5÷7m or 10÷12m.
  3. For each outside diameter of the table it can be also executed other wall tickness of the range specified in the table.



**Tab.2 Dimensions - Line pipe HOT ROLLING CPE MILL**

| Nominal | OD    |       | WT    |       | Weight |       | Lmax |    | Identification |            |      |
|---------|-------|-------|-------|-------|--------|-------|------|----|----------------|------------|------|
|         | in    | mm    | in    | mm    | lb/ft  | kg/m  | ft   | m  | API            | STD/XS/XXS | Sch. |
| 1/2     | 0.840 | 21.3  | 0.109 | 2.77  | 0.85   | 1.27  | 29.5 | 9  | 5L             | STD        | 40   |
|         |       |       | 0.147 | 3.73  | 1.09   | 1.62  |      |    | 5L             | XS         | 80   |
| 3/4     | 1.050 | 26.7  | 0.113 | 2.87  | 0.88   | 1.69  | 29.5 | 9  | 5L             | STD        | 40   |
|         |       |       | 0.154 | 3.91  | 1.13   | 2.20  |      |    | 5L             | XS         | 80   |
| 1       | 1.315 | 33.4  | 0.133 | 3.38  | 1.01   | 2.50  | 29.5 | 9  | 5L             | STD        | 40   |
|         |       |       | 0.179 | 4.55  | 1.26   | 3.24  |      |    | 5L             | XS         | 80   |
|         |       |       | 0.250 | 6.35  | 1.58   | 4.24  |      |    |                |            | 160  |
| 1 1/4   | 1.660 | 42.2  | 0.140 | 3.56  | 1.05   | 3.39  | 29.5 | 9  | 5L             | STD        | 40   |
|         |       |       | 0.191 | 4.85  | 1.33   | 4.47  |      |    | 5L             | XS         | 80   |
|         |       |       | 0.250 | 6.35  | 1.58   | 5.61  |      |    |                |            | 160  |
| 1 1/2   | 1.900 | 48.3  | 0.145 | 3.68  | 1.08   | 4.05  | 39.4 | 12 | 5L             | STD        | 40   |
|         |       |       | 0.200 | 5.05  | 1.37   | 5.39  |      |    | 5L             | XS         | 80   |
|         |       |       | 0.281 | 7.14  | 1.68   | 7.25  |      |    |                |            | 160  |
| 2       | 2.375 | 60.3  | 0.154 | 3.91  | 1.13   | 5.44  | 39.4 | 12 | 5L             | STD        | 40   |
|         |       |       | 0.172 | 4.37  | 1.23   | 6.03  |      |    | 5L             |            |      |
|         |       |       | 0.188 | 4.78  | 1.31   | 6.54  |      |    | 5L             |            |      |
|         |       |       | 0.218 | 5.54  | 1.45   | 7.48  |      |    | 5L             | XS         | 80   |
|         |       |       | 0.250 | 6.35  | 1.58   | 8.45  |      |    | 5L             |            |      |
|         |       |       | 0.344 | 8.74  | 1.82   | 11.11 |      |    |                |            | 160  |
| 2 1/2   | 2.875 | 73.0  | 0.216 | 5.16  | 1.44   | 9.14  | 39.4 | 12 | 5L             | STD        | 40   |
|         |       |       | 0.250 | 6.35  | 1.58   | 10.44 |      |    |                |            | 160  |
|         |       |       | 0.276 | 7.01  | 1.66   | 11.41 |      |    | 5L             | XS         | 80   |
| 3       | 3.500 | 88.9  | 0.216 | 5.49  | 1.44   | 11.29 | 39.4 | 12 | 5L             | STD        | 40   |
|         |       |       | 0.300 | 7.62  | 1.73   | 15.27 |      |    | 5L             | XS         | 80   |
|         |       |       | 0.438 | 11.13 | 1.88   | 21.35 |      |    |                |            | 160  |
| 3 1/2   | 4.000 | 101.6 | 0.226 | 5.74  | 1.48   | 13.57 | 39.4 | 12 | 5L             | STD        | 40   |
|         |       |       | 0.318 | 8.08  | 1.77   | 18.63 |      |    | 5L             | XS         | 80   |
| 4       | 4.500 | 114.3 | 0.237 | 6.02  | 1.53   | 16.07 | 39.4 | 12 | 5L             | STD        | 40   |
|         |       |       | 0.337 | 8.56  | 1.81   | 22.32 |      |    | 5L             | XS         | 80   |
|         |       |       | 0.438 | 11.13 | 1.88   | 28.32 |      |    |                |            | 120  |

**Notes:**

1. Lengths: 6m or 9m or 12m ;
2. For each outside diameter of the table it can be also executed other wall tickness of the range specified in the table.

**4. Tolerances**

| Standard             | Outside Diameter | Wall Thickness | Weight                                                  |
|----------------------|------------------|----------------|---------------------------------------------------------|
| API 5L               | ±0.75%           | +15/-12.5%     | +10/-3.5% for single lengths<br>-1.75% for carload lots |
| ASTM A 53, ASTM A333 | ±1%              | -12.50%        | ±10% of the pipe                                        |
| SR EN 10208/1        | ±0.75%           | +15/-12.5%     | +10/-3.5% of the pipe                                   |

## 5. Chemical Composition (%)

| <b>Steel group</b> | <b>C max</b> | <b>Mn max</b> | <b>Si max</b> | <b>S max</b> | <b>P max</b> |
|--------------------|--------------|---------------|---------------|--------------|--------------|
| Grade A, L210GA    | 0.22         | 0.90          | 0.40          | 0.030        | 0.030        |
| Grade B, L245GA    | 0.27         | 1.15          | 0.40          | 0.030        | 0.030        |
| Grade 6            | 0.30         | 0.29÷1.06     | 0.10 min      | 0.025        | 0.025        |

## 6. Mechanical Properties

| <b>Steel group</b> | <b>Tensile Strength</b> | <b>Yield Strength min.</b> | <b>Elongation</b>        |
|--------------------|-------------------------|----------------------------|--------------------------|
|                    | <b>PSI (MPa)</b>        | <b>PSI (MPa)</b>           | <b>%</b>                 |
| Grade A, L210GA    | min.48000(331)          | 30000(207)                 | acc.to the wall tickness |
| Grade B, L245GA    | min.60000(415)          | min.30000(205)             |                          |
| Grade 6            | min.60000(415)          | min.35000(240)             |                          |

## 7. Lengths

| <b>Standard</b> | <b>Nominal Length</b>                                                                                                                                                                    | <b>Min. Length</b> |          | <b>Average Length</b> |          | <b>Max. Length</b> |          |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|-----------------------|----------|--------------------|----------|
|                 |                                                                                                                                                                                          | <b>ft</b>          | <b>m</b> | <b>ft</b>             | <b>m</b> | <b>ft</b>          | <b>m</b> |
| API 5L          | 20ft (6m)                                                                                                                                                                                | 16                 | 4.88     | 17.5                  | 5.33     | 22.5               | 6.86     |
|                 | 40ft (12m)                                                                                                                                                                               | 22                 | 6.71     | 35.0                  | 10.67    | 39.4               | 12.00    |
| ASTM A 53       | random lengths: 6÷12m (19.7÷39.3ft)<br>fixed lengths within the random lengths range<br>tubes under 6m (19.7ft) will delivered as multiple lengths<br>tolerances: +100/0 mm (+3.94/0 in) |                    |          |                       |          |                    |          |
| SR EN 10208/1   | 26.2ft (8m)                                                                                                                                                                              | 19.7               | 6.00     | 27.88                 | 8.50     | 36.09              | 11.00    |
|                 | 36.1ft (11m)                                                                                                                                                                             | 29.5               | 9.00     | 34.45                 | 10.5     | 39.37              | 12.00    |

## 8. Protection

- unprotected;
- external varnished with black or clear lacquer;
- if required , the plain end pipes can be delivered with plastic caps at both ends.

### **9. Marking**

According to standard or per customer request.

### **10. Delivery**

In bundles up to 4000 kg (8800 lbs) tied in minimum six places with steel strip.  
Quantity tolerances:  $\pm 5\%$  per size or / and per total.

### **11. Mill test report**

Mill test reports are issued to customer requirements. Usually they comply with EN 10204, type 3.1.

### **12. Quality certified**

API 5L; TUV.