



中普(邯鄹)钢铁有限公司  
ZHONGPU (Hbandan) IRON AND STEEL CO., LTD

产品质量证明书  
CERTIFICATE OF PRODUCT QUALITY

|                       |  |             |                      |             |              |                 |                               |                                    |                                   |                |                     |  |                  |       |        |                            |                |      |                 |                      |                               |      |   |   |          |   |
|-----------------------|--|-------------|----------------------|-------------|--------------|-----------------|-------------------------------|------------------------------------|-----------------------------------|----------------|---------------------|--|------------------|-------|--------|----------------------------|----------------|------|-----------------|----------------------|-------------------------------|------|---|---|----------|---|
| 收货单位<br>PURCHASER     | 北京普阳国际能源管理股份有限公司   |             |                      |             |              |                 | 订单编号<br>CONTRACT NO.          | BJ179EP1240927<br>S02410110204     |                                   |                |                     | 车号<br>VEHICLE NO.                                    | 冀EV2010          |       |        |                            |                |      |                 |                      |                               |      |   |   |          |   |
| 产品名称<br>PRODUCT       | 碳素结构钢<br>CARBON STRUCTURAL STEELS  |             |                      |             |              |                 | 交货状态<br>CONDITION OF DELIVERY | AR                                 |                                   |                |                     | 证明书号<br>CERTIFICATE NO.                              | GC202501085218   |       |        |                            |                |      |                 |                      |                               |      |   |   |          |   |
| 执行标准<br>SPECIFICATION | ASTM A36/A36M-2019   |             |                      |             |              |                 | 发货日期<br>DATE OF DELIVERY      | 2025-01-08                         |                                   |                |                     | 认证号<br>AUTHORIZATION NO.                             |                  |       |        |                            |                |      |                 |                      |                               |      |   |   |          |   |
| 炉号<br>HEAT NO.        | 批号<br>BATCH NO.  | 牌号<br>GRADE | 尺寸<br>SIZE(mm)       |             |              | 张数<br>PIECES    | 重量<br>WEIGHT<br>(t)           | 拉伸试验<br>TENSILE TEST               |                                   |                |                     | 冲击吸收能量 J(KV <sub>2</sub> )<br>IMPACT ABSORBED ENERGY |                  |       |        | 弯曲<br>BEND<br>TEST<br>180° | 硬度<br>HARDNESS |      |                 |                      | Z向断面收缩率%<br>SECTION SHRINKAGE |      |   |   | 探伤<br>UT |   |
|                       |  |             | 厚度<br>THICK-<br>NESS | 宽度<br>WIDTH | 长度<br>LENGTH |                 |                               | 屈服<br>强度<br>R <sub>eL</sub><br>MPa | 抗拉<br>强度<br>R <sub>m</sub><br>MPa | 屈服<br>比<br>YSR | 断后<br>伸长<br>率A<br>% | 方向<br>DIREC-<br>TION                                 | 温度<br>TEMP<br>°C | 1     | 2      |                            | 3              | AVE. | 1               | 2                    | 3                             | AVE. | 1 | 2 |          | 3 |
| 2420211366            | 24E095048  | ASTM A36    | 16                   | 2440        | 12000        | 2               | 7.356                         | 306                                | 466                               | 0.66           | 21.5                | L  | 20               | 109   | 125    | 120                        | 118            | OK   |                 |                      |                               |      |   |   |          |   |
| 2420211366            | 24E095047  | ASTM A36    | 16                   | 2440        | 12000        | 9               | 33.102                        | 304                                | 463                               | 0.66           | 21.0                | L  | 20               | 124   | 132    | 117                        | 124            | OK   |                 |                      |                               |      |   |   |          |   |
| 总计(TOTAL)             |  |             |                      |             |              | 11              | 40.458                        |                                    |                                   |                |                     |  |                  |       |        |                            |                |      |                 |                      |                               |      |   |   |          |   |
| 批号<br>BATCH NO.       | 化学成分 CHEMICAL COMPOSITION (质量分数) / %   |             |                      |             |              |                 |                               |                                    |                                   |                |                     |  |                  |       |        |                            |                |      |                 | 其它<br>OTHER          |                               |      |   |   |          |   |
|                       | C  | Si          | Mn                   | P           | S            | Al <sub>t</sub> | Al <sub>s</sub>               | Nb                                 | V                                 | Ti             | Cr                  | Ni   | Cu               | Mo    | B      | N                          |                | CEV  | P <sub>cm</sub> |                      |                               |      |   |   |          |   |
| 24E095048             | 0.19   | 0.16        | 0.24                 | 0.029       | 0.011        |                 | 0.005                         | <0.0005                            | 0.002                             | 0.003          | 0.026               | 0.014  | 0.013            | 0.004 | 0.0001 | 0.006                      |                | 0.24 | 0.21            |                      |                               |      |   |   |          |   |
| 24E095047             | 0.19   | 0.16        | 0.24                 | 0.029       | 0.011        |                 | 0.005                         | <0.0005                            | 0.002                             | 0.003          | 0.026               | 0.014  | 0.013            | 0.004 | 0.0001 | 0.006                      |                | 0.24 | 0.21            |                      |                               |      |   |   |          |   |
| 注释<br>NOTES           | 1.位置方向 T=横向 TRANSVERSE L=纵向 LONGITUDINAL<br>2.交货状态 N=正火 Q=淬火 CR=控轧 TMCP=热机械轧制 AR=热轧 NR=正火轧制 T=回火   |             |                      |             |              |                 |                               |                                    |                                   |                |                     |  |                  |       |        |                            |                |      |                 |                      |                               |      |   |   |          |   |
| 说明<br>REMARKS         | 1.本产品的表面质量和外形尺寸均合格。<br>Surface quality and shape size of product are all qualified.<br>2.兹证明本产品按照标示产品执行标准和订货协议要求制造,检测并判定,氮含量提供产品执行标准规定限制值内保证。<br>It is hereby certified that the product is manufactured, tested and judged in accordance with the implementation standards of the labeled product and the order agreements. The nitrogen content is guaranteed within the limits specified in the product implementation standards.<br>3.本产品质量证明书无产品质量专用章无效。<br>The certificate of product quality is invalid without quality stamp.<br>4.如发现质量问题请与我公司联系。<br>Please contact us if any quality problem occurred. |             |                      |             |              |                 |                               |                                    |                                   |                |                     |  |                  |       |        |                            |                |      |                 | 签发:<br>ISSUED<br>李慧芳 |                               |      |   |   |          |   |

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