

## HV05

### Hard chrome plated induction hardened barsteel TiRun 482

#### General

Hard chrome plated barsteel induction hardened TiRun 482.

The bar is ready to use and has a diameter tolerance of f7.

The thickness of the chrome layer is minimum 20 µm; sizes < 20 mm minimum 15 µm.

The surface roughness (Ra) is maximum 0,2 µm (cut-off 0,8 mm).

The surface hardness is minimum 800 HV.

The hard chromium plated bars will be mainly used as piston rods for hydraulic cylinders, but there are many more applications like bars for linear movement.

In an aggressive environment, like the process industry, in the mining industry, along the shore, on the roads and in the offshore-industry, one could use chrome plated stainless steel bars or nickel chrome plated bars.

#### Chemical analysis

| C%   | Si%  | Mn%  | V%   |
|------|------|------|------|
| 0,39 | 0,40 | 1,25 | 0,13 |

#### Mechanical properties

|                                   |          |
|-----------------------------------|----------|
| Yieldstrength N/mm <sup>2</sup>   | ≥ 580    |
| Tensilestrength N/mm <sup>2</sup> | 850-1000 |
| Elongation (A5) min. %            | ≥ 14     |
| Hardness HB                       | 250-300  |

The induction hardened surface of the base material has a hardness of minimum 55 HRC. The column below shows the depth, where the hardness is still minimum 41 HRC.

| Diameters in mm | Hardeningdepth in mm |
|-----------------|----------------------|
| ≤ 40            | 1 - 1,8              |
| > 40            | 1,0                  |

#### Out of roundness

Maximum 1/3 of the diameter tolerance.

#### Straightness

For diameters ≥ 30 mm: maximum deviation of 0,2 mm per 1000 mm (< 30 mm: 0,3 per 1000 mm).

#### Weldability

We advise preheating: 200°C - 300°C.

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J26/252/16.01.2004