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## Characteristics for grade KhN60MYUVT-VD ( XH60MYOBT-BД ).

|                           |                                                       |
|---------------------------|-------------------------------------------------------|
| <b>Grade :</b>            | KhN60MYUVT-VD ( XH60MYOBT-BД ) ( ЭП539-БД XH60MYOBT ) |
| <b>Classification :</b>   | High-temperature or heat-resistant alloy              |
| <b>Equivalent grades:</b> | Is absent                                             |

### Chemical composition in % for grade KhN60MYUVT-VD ( XH60MYOBT-BД )

| Fe       | C              | Si         | Mn         | Ni               | S           | P            | Cr         | Ce          | Mo       | W          | Ti       | Al       | Cu          | B           |
|----------|----------------|------------|------------|------------------|-------------|--------------|------------|-------------|----------|------------|----------|----------|-------------|-------------|
| max<br>4 | 0.04 -<br>0.09 | max<br>0.5 | max<br>0.5 | 57.77 -<br>68.46 | max<br>0.01 | max<br>0.015 | 17 -<br>19 | max<br>0.02 | 5 -<br>7 | 2.5 -<br>4 | 2 -<br>3 | 3 -<br>4 | max<br>0.07 | max<br>0.02 |

Comment: Ni is a basis; the percentage of Ni is given approximately.

### Mechanical properties under T=20°C for grade KhN60MYUVT-VD ( XH60MYOBT-BД )

| Assortment         | Dimension | Direct. | $\sigma_B$ | $\sigma_T$ | $\delta_5$ | $\psi$ | KCU                 | Heat treatment       |
|--------------------|-----------|---------|------------|------------|------------|--------|---------------------|----------------------|
| -                  | mm        | -       | MPa        | MPa        | %          | %      | kJ / m <sup>2</sup> | -                    |
| Bar, GOST 23705-79 |           |         | 640        |            | 7-10       |        |                     | Hardening and ageing |

|                                                                                                   |                                           |
|---------------------------------------------------------------------------------------------------|-------------------------------------------|
| <b>Brinell hardness for KhN60MYUVT-VD ( XH60MYOBT-BД ) (quenching, ageing), Bar GOST 23705-79</b> | <b>HB 10<sup>-1</sup> = 285 - 363 MPa</b> |
|---------------------------------------------------------------------------------------------------|-------------------------------------------|

### Specification : Mechanical properties :

|            |                                             |
|------------|---------------------------------------------|
| $\sigma_B$ | - Tensile strength , [MPa]                  |
| $\sigma_T$ | - Yield stress , [MPa]                      |
| $\delta_5$ | - Specific elongation at fracture , [ % ]   |
| $\psi$     | - Reduction of area , [ % ]                 |
| KCU        | - Impact strength , [ kJ / m <sup>2</sup> ] |
| HB         | - Brinell hardness , [MPa]                  |

Database of steels and alloys (Marochnik) contains information about chemical composition and properties more then 2500 steels and alloys (stainless steel, alloy steel, carbone steel, structural steel, tool steel, cast iron, aluminum alloy, titanium alloy, copper alloy, nickel alloy, magnesium alloy and others).  
Helpfull for specialists in grade technology, structural engineer, mechanical engineer, metallurgy and metal trader

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