

ROLLED PRODUCTS FROM STEEL WITH HIGHER FATIGUE RESISTANCE

Hot-rolled sheets and coiled strips of steel grades 18YuT (Ch-33) and 19YuFT (Ch-37) with higher fatigue resistance according to TU 14-1-5172-92 are used in agricultural machine building, automobile building industry and civil construction for fabrication of welded and nonwelded metalworks, including manufacture of cold roll-formed closed welded shapes and electric welded pipes with small radii of web rounding.

Range of products

| Steel Grade | Thickness, mm | Width, mm | Length, mm |
|-----------------|---------------------------|------------|------------|
| 18 YuT (Ch-33) | From 2.5 to 3.0, incl. | Up to 1250 | 2500-12000 |
| | Over 3.0 up to 4.0 incl. | Up to 1420 | |
| | Over 4.0 до 8.0 , incl. | Up to 1600 | |
| 19 YuFT (Ch-37) | 3.0 | Up to 1250 | |
| | Over 3.0 up to 4.0, incl. | Up to 1420 | |
| | Over 4.0 up to 8.0, incl. | Up to 1620 | |

Delivery of flat products with other dimensions as well as skelps and mults for cold roll-formed sections is possible, if it is agreed upon with a customer.

Dimension and shape tolerances are to be in conformity with GOST 19903-74 as to higher and normal accuracy of rolling, normal and improved flatness and type of edge.

Chemical composition

| Steel Grade | Fraction of total mass, % | | | | | | | | |
|-----------------|---------------------------|-----------|-----------|-------|-------|-----------|-----------|-----------|-------------|
| | C | Si | Mn | P max | S max | Al | V | Ti | Ca |
| 18 YuT (Ch-33) | 0.14-0.22 | 0.12-0.30 | 0.40-0.65 | 0.035 | 0.035 | 0.02-0.07 | - | 0.1-0.04 | 0.001-0.030 |
| 19 YuFT (Ch-37) | 0.16-0.22 | 0.25-0.45 | 0.50-0.75 | 0.035 | 0.035 | 0.02-0.07 | 0.02-0.07 | 0.01-0.04 | 0.001-0.30 |

Steel weldability is achieved through steel making technology and chemical composition.

Mechanical properties

| Steel Grade | Ultimate strength, kgf/mm2, not less than | Yield strength, kgf/mm2, not less than | Relative elongation δ_5 , % |
|----------------|---|--|------------------------------------|
| 18 YuT(Ch-33) | 45 | 33 | 26 |
| 19 YuFT(Ch-37) | 48 | 37 | 24 |