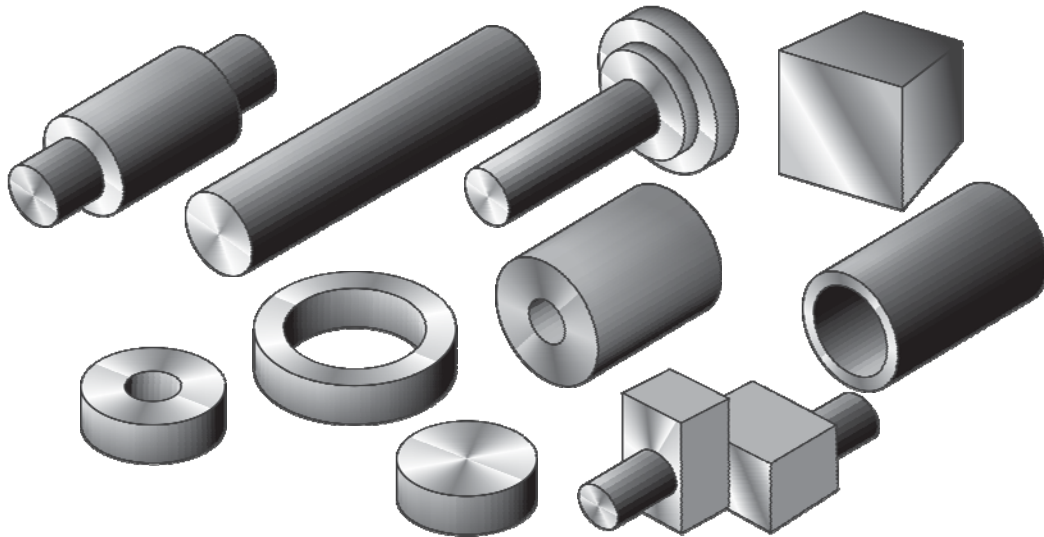


**Production cooperation.
Press-forging facilities and forgings production**



■ Forgings produced out of preliminary machined ingots:

- manufacturing of parts of carbon and alloyed grades of steel having round, square, rectangular, and compound cross-section, such as:
 - shafts weighing 0,5 to 105 tons, and having length 1,5 to 26 meters;
 - cylinders weighing 0,2 to 105 tons, and having diameter 250 to 2000 mm, and length 600 to 9000 meters;
 - rings, bands weighing 0,2 to 65 tons, having diameter 0.5 to 4.8 meters,
 - plates weighing 0,5 to 110 tons, and having width up to 3,5 meters;
 - cubes weighing 0,4 to 40 tons, having dimensions: 250x250x250 to 1800x1600x1500 mm;
 - production of crankshafts forgings with throws location in mutually perpendicular planes. Forgings weight is 3 to 105 tons, overall dimensions of throws are 300 to 1600 mm;
 - producing of forgings such as hollow spheres truncated from both sides at press having capacity of 10000 tons. Weight of forgings is 10 to 25 tons, spheres' dimensions are R=800 to 1200 mm, H=1000 to 1600 mm.

■ Forgings weighing 5 to 400 kg of such grades of steel: 20, 35, 45, 40XH, 40X, 38X2H2MA, 20X2H4A. Manufacturing of forgings of carbon and alloyed grades of steel having round, square, rectangular, and compound cross-section, by means of different methods:

- Forging of discs, cubes, bushings, rings, shafts, hobs, hexagon head bolts with M64-M100 thread sizes, hexagonal nuts with M42-M180 thread sizes, eyebolts with M72-M100 thread sizes, by means of open die forging;

Production of coil springs of rolled metal products, of steel 60C2(A), having thickness 8 to 50 mm by means of winding.

■ Stampings weighing 0,011 to 33 kg produced of carbon grades of steel, namely: eyebolts with M8-M64 thread sizes, hexagon head bolts with M16-M56 thread sizes, single hooks having capacity 2 to 8 tons, pulling hooks 0,5 to 5 tons, angle pieces 1/4" to 2" and T-joints 1/4" to 2", shear blades for forage harvesters, Belleville disc springs.

■ Forging and pressing ingots melt in EAF, treated in LF unit, weighing 1,6 to 170 tons of carbon and alloyed grades of steel, and also those of low-carbon stainless grades of steel weighing up to 51,6. Vacuum-treated bottom-cast ingots weighing 3 to 69,4 tons of dead-killed steel. Quadrangular bottom-cast ingots weighing 5 to 13,3 tons for rolling mills.