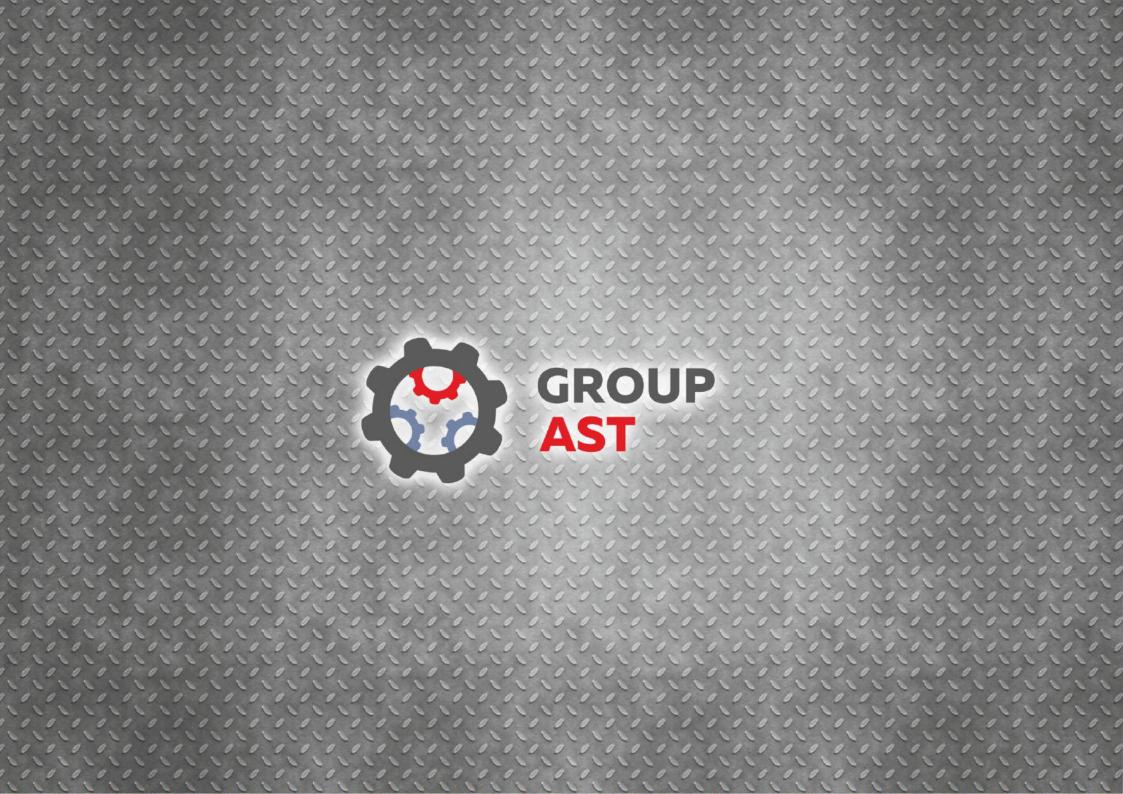


MANUFACTURING OF REINFORCEMENT CAGES



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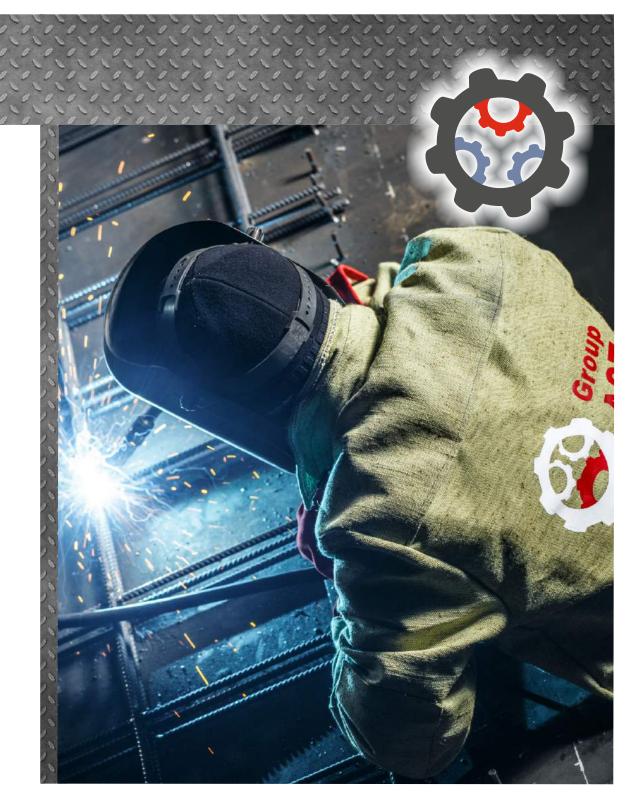
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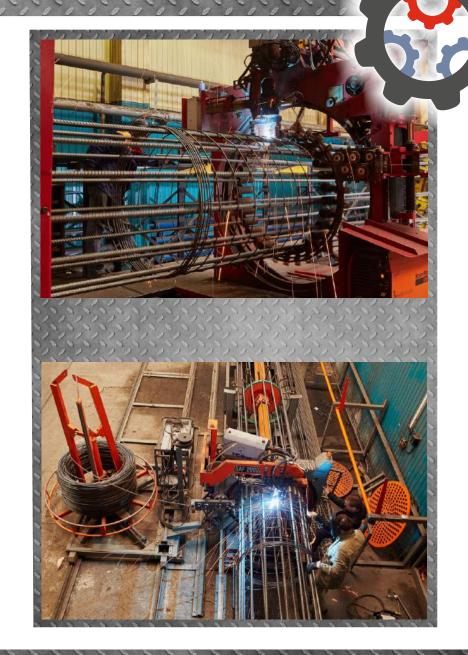
### **Brief information about company**

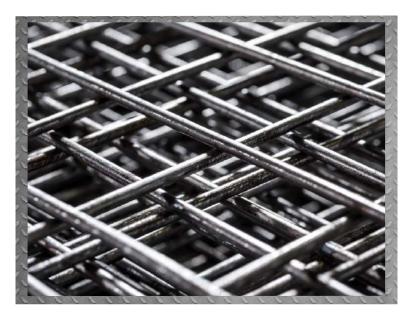


The «AST Group» is one of the leading service center for processing of the reinforcing bars.

The «AST Group» manufacturing company is specializing in the production of the reinforcement cages for industrial construction, manufacturing shops and offices in the regions allow high-quality supply of the reinforcement products throughout Russia.

The AST Group personnel are well qualified. Work experience with federal and foreign companies allows to introduce new technology and meet international standards. Production area equipped with high-tech equipment, which allows to maintain high rates of production work and reduce the time of delivery.





#### The reinforcement cages

Our main area of activity is manufacturing and supply of the reinforcement cages produced by contact welding method from reinforcing bars of different diameter. The "AST Group" company is manufacturing three basic type of the reinforcement cage, today:

#### Plane frameworks

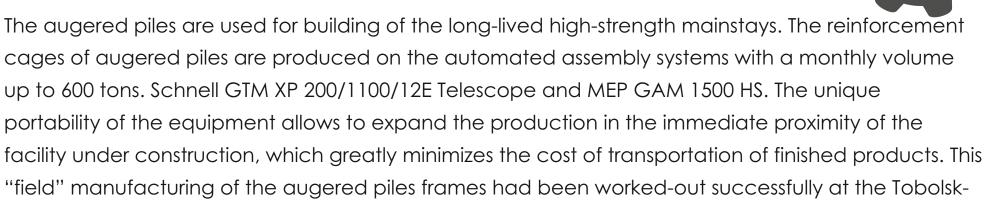
The plane frameworks from the reinforcing bars are used for armoring of linear design concrete structure. The diameter of the used reinforcement is from 4 to 36 mm.



#### Space frames

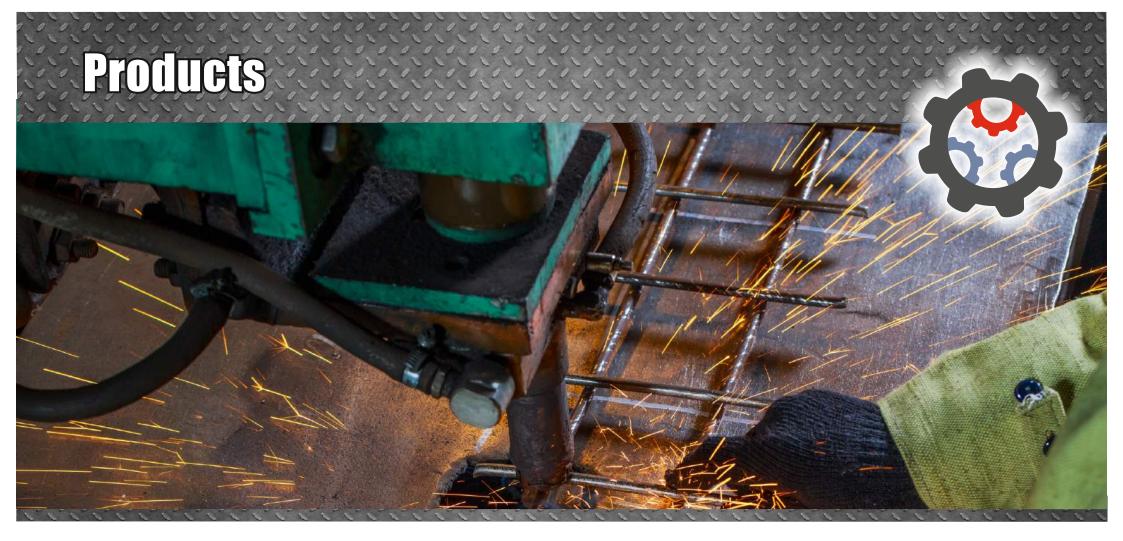
The spatial reinforcement frames are separate kind of the metal grid, which used for the strengthening of the monolithic multistoried slabs, providing of the high resistance of the mainstays, also increasing of bearing capability and strength properties of Reinforced Concrete Structures and Reinforced concrete goods by armoring method. Spatial structure of such reinforcing grid allows to use it in operations with 3D products, which have significant thickness. Efficiency of construction operations is contributed to the usage of the high-quality materials. The reinforcement cage allows to save time on the armoring of various type mainstays.

### Frame of augered piles









#### Reinforcement mesh. Welded mesh

The reinforcement meshes are metal wide applications, used to improve the strength characteristics of a construction object, to create a powerful protection against harmful mechanical impacts for each reinforced element and ensure a long and favorable operation of the building. The finished product is a system of transverse and longitudinal rods, arranged perpendicular to each other and welded by contact welding. The meshes form a rectangular or square shape. Rebar class Al and AllI, and the wire of VR-1 are used for the manufacture of reinforcing meshes. The requirements are described in GOST 23279-85.

### Coil Mesh

#### **Application field**

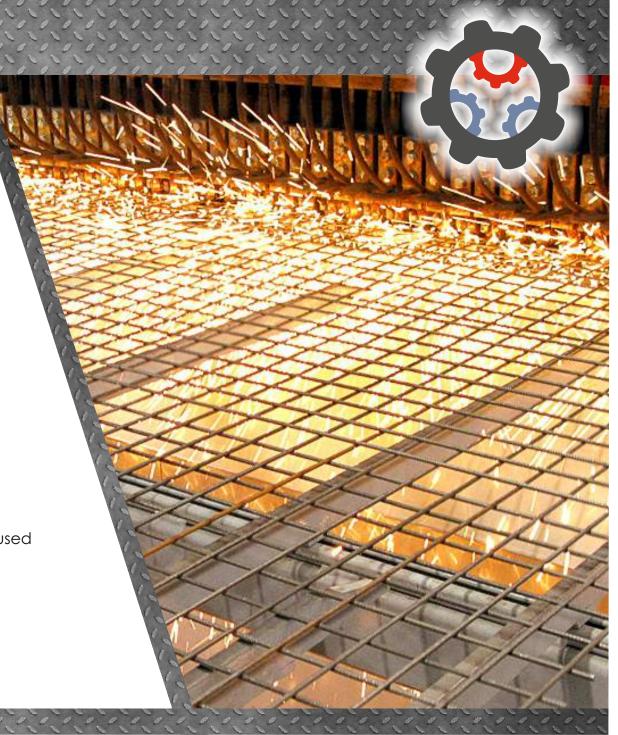
The technology welded coil mesh, according to GOST 23279-85 found wide application in civil and industrial construction. It is used:

### For armoring:

mainstays (coil mesh for the mainstays), masonry (coil mesh for brick), block masonry (grid and masonry blocks), base under the cover stone, pavement.

#### As attachment:

roofing insulation roof, facade insulation for the lining, insulation when installing heat runs. In addition, the galvanized coil mesh found application as ventilation grilles, fences of various objects (suburban areas, etc.), frameworks of greenhouses and polytunnels, and also used for the manufacture of cells.



### Built-in parts

The manufacturing of the built-in parts from different sections of graded steel. The built-in parts are welded construction, which is laid during concreting in the "body" of concrete or reinforced concrete element. The built-in parts serve for reliable ligament of prefabricated and precast-monolithic reinforced concrete structures with each other and with other parts of buildings and structures. Built-in parts can be manufactured by cold forming or welding, like sheet, and profile steel. As the latter it can be angles, channels, various types of sheet, flat and round rolled steel products.







### Formed elements

All the finished products are manufactured on modern equipment and automatic systems.

The advantages of using formed elements are minimization of time costs for the manufacture of concrete products and structures; space saving in the manufacture of concrete products due to the delivery of finished products directly to the place of production; no waste during production and installation; can be made in a short time in the right quantity; saving on transport costs. Due to its small size, there is no need to hire for transportation of lengthy transport; accurate geometrical dimensions.



### Mesh fence

### Design features

The quality of our products is to use low carbon steel and a double layer of protection from corrosion (zinc and plastic). The fence consists of panels in various heights. Fastening of the panels is carried out on the metal strip with nuts and bolts. The main feature of these designs is the good visibility of the fenced area, since the grid provides an overview around the perimeter. Mesh fences have the following advantages: high wear resistance and long lifespan, various color, technological dyeing is carried out over the whole surface and in any color. Protection against environmental influences, aesthetic appearance, resistance to impact actions and the actions of the vandals. The ease of installation. Mesh panels are mounted on a convenient fasteners, with no welding required. Low cost, space saving due to the minimum thickness of the fence.







In the West Siberian region our company supplies products to foreign engineering companies:

Salym petroleum development N. V.

"Renaissance construction"

Yamata Insaat Turizm ve Tidzharet A.\$.

The unique portability of the equipment allows to expand the production in the immediate proximity of the facility under construction, which greatly minimizes the cost of transportation of finished products. This "field" manufacturing of the augered pile frames had been worked-out successfully at the Tobolsk-Polymer plant construction.

## Civil engineering



The AST group is a major supplier of reinforcement cages and steel structures to construction sites in Chelyabinsk and the southern Urals. The company's products are used in the construction of residential complexes, such as "Western Beam", "AKADEM Riversait", Park, Park - 2, Manhattany and many others.



### Economy



### Examples of economic evaluation

Our company offers the reinforcement products for construction of certain objects. This gives you the opportunity to achieve high economic efficiency, the evaluation of which is presented below and shown on examples.

### Example 1

Monolithic-frame building. Height of 22 floors. Class – economy. Area – 16 thousand square meters\*.

The use of the ready-made frames and the presets allows to save 23.8 million rubles, or 6.4% of the estimated cost of the project.

This is evidenced by the data given in the table

Economic indicators	Units	Metal processing on the site	Supply of stocks and finished
Construction time	days	738	540
The cost of working capital, total.	thsd rub.	34 452	_
Including those associated with: - creation of inventory of own production; - formation of excess waste; - construction time	thsd rub.	425 612 33 415	_
The payroll team of steel fixers (10 persons)	thsd rub.	4 356	_
The set of shuttering (with regard to turnover 100 times)	thsd rub.	_	1 600
The cost of making frames	thsd rub.	_	17 002
Total costs	thsd rub.	42 389	18 602
The share of costs of the total construction costs	thsd rub.	11,4	5













Zapadnyi Luch Construction Company



Onix Construction Company

SMIK Plant

ESK Eurasian Construction Company















CHTPZ

Altai Transformer Plants **ALTTRANS** 

Academ CITY

Legion Construction Company

PNTZ Plant

LERU

RENAISSANCE HEAVY INDUSTRIES













Mostovik NPO Plant



Chelyabinsk Tube Rolling Plant















Chelyabinsk Tractor Plant



**GAZPROM NEFT** 

**EVRAZ** Holding



Steel Industrial Company

МЕЧЕЛ











MECHEL

Magnitogorsk Iron and Steel Works

Salym Petroleum

Milestone Development

UGMK

Greenflight

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