

RETROM's Technical Abilities Presentation

S.C. RETROM S.A. has been founded in 1979, as manufacturer and purchaser of equipment for industrial automations, good part of them being made under FOXBORO licence. During these 23 years of activity, RETROM has kept its position of leader on the Romanian market, at this moment covering about 45% from the market on this field of activity.

From organization point of view, in company are departments of products research and design, departments of technologic design, authorized laboratories for tests, manufacturing workshops and a complex team of SERVICE.

The company has the technical ability and highly experienced team of experts that allow us to design and manufacture specific products or to find optimal technical solution to match our customers needs which could be requested for their specific applications. The wide range of automation and control elements have applicability in all sectors of industries: chemical and petrochemical industry, energy (thermal as well as nuclear), oil and gas, naval industry, etc..

Main activities:

- Designing, manufacturing and selling of equipment for industrial automation
- Mounting works in the activity field
- Service in testing, verification and calibration fields
- Export - import operations and industrial economic co-operation
- Reparation and maintenance activities for industrial valves and fittings with DN10 ... DN150mm
- Research in the activity field

In order to satisfy the beneficiary's requirement, the enterprise's manufacturing program has enlarged so that, today, our list of products includes a large range of products.

The principal groups of products are as follows:

- Flow - rate measurement and control equipment,
- Temperature transducers,
- Level measurement and control instruments,
- Driving and setting equipment,
- Electric components for railway cars and locomotives;
- Automotive components (exhaust silencer in various type, oil filter, rubber coupling lines, etc.); S.C. RETROM S.A. own RAR authorization.
- Specific components for nuclear power plants.

In addition to our main activity, we can offer a large range of services as reparation of measurement equipment used in the activity fields above-mentioned or a large diversity of mechanical workings on the following machineries:

- Lathes:
 - Machine lathes: Dmax. 700x1500mm
 - Vertical lathes: Dmax. 1000x600mm



- SARO auto/lathes: Dmax. 42x3000/6000mm
- CN lathes with 2 axis: Dmax. 160x800mm
- Milling machines:
 - Vertical and horizontal milling machines: max.320x1000mm
 - Universal tool/room milling machines
- Grinding machines:
 - Surface grinder 300x800mm
 - Internal/external cylindrical grinder
- Electrical discharge machine with solid or filamentary electrode.

Our company had a modern tool-room workshop that assures all tools (injection die, anvil tool, drawing die, devices, etc.) for internal needs and can honors any requirement for their manufacture.

To develop the mechanical works and to respond to all market requirements, RETROM makes investments in high technologies, buying vertical numerically controlled processing center with 4 axis – overall dimension of processing parts: 810x460 and maximum weight of 300kg and numerically controlled lathes with 2 axis – maximum processing dimension Ø330x650.

The processing capacity for mechanic works, calculated at 16 hours per day is, as follows:

- small parallel lathes - 480 hours/day;
- big parallel lathes - 160 hours/day;
- auto lathes – 80 hours/day;
- milling machines - 320 hours/day;
- boring and milling machine - 80 hours/day;
- small CNC lathes - 56 hours/day;
- drilling machines - 400 hours/day;
- vertical numerically controlled processing center with 4 axis – 56 hours/day;
- numerically controlled lathes with 2 axis – 200 hours/day.

This capacity could be enlarged any time by organizational measurements (two or three shifts).

We would like to present you below three workshops of RETROM, where we are able to manufacture products that make the object of yours requirements:

1. The metal workings by hot and cold forming workshop, equipped with:

- eccentric power press of: 6.3; 10; 16; 25; 40; 63; 100; 250 Tf;
- guillotine for sheet with maximum dimension of 8x3000 mm;
- hydraulic press of 40 and 150 Tf;
- steel sheet roll grooving (minimum role diameter 70mm);
- silicon sheet cutting-of and banding machine;
- electric and methane gas furnace for heating or melting metals for forging and moulding;
- air forging hammer of 200kgf;
- pressure die casting equipment for non-ferrous alloys, with a capacity approximate of 600cm³;



- friction press of 40; 250; 400 Tf;
- heating and melting plant with high frequency current;
- blasting equipment;
- burr-removing machine.

These equipments allow us to execute the following:

a) cold workings:

- stamping (maximum sheet thickness of 8mm);
- cupping (maximum height of the part of 125mm);
- bending;
- forming;
- calibration;
- drilling;
- blasting, etc.

b) hot workings:

- forging without mould;
- moulding;
- pressure die casting;
- burr-removing, etc.

The maximum weight of the part is approximate of 10kg.

The maximum size of the part is approximate of 300x300mm.

The tools, controllers and devices used in this department are designed and manufactured in our tool shop, which is equipped with modern technology.

The processing capacity in our metal workings by hot and cold forming workshop is approximate of 200 hours/day, calculated at 8 hours/day for one device. This capacity could be enlarged any time by organizational measurements (two or three shifts).

2. The cure and plastics workings workshop is supplied with:

- hydraulic presses for vulcanization of 200Tf;
- roller for rubber compound;
 - rubber forming extrusion;
 - rubber cords vulcanization and manufacture line;
 - thermo elastic plastics injection machines type MI 400 with processing capacity of 400 cm³
 - thermo rigid plastics injection machines type BATTENFELD – BSCM 300 – 100B, with processing capacity of 300 cm³

The products obtained through vulcanization are made from

- regular rubber
- electrical insulator rubber
- petroleum resistant rubber (simple gasket, with textile or metallic insertion)
- neoprene rubber for nuclear parts
- etc.

These products reach up to the mass of 1 kilo and maximum overall dimensions of 400mm.



The materials used in the injection process are: polyamides, PVC, ABS, low and high density polyethylene, polypropylene, methyl poly methacrylate, bakelite, ebonite, etc.

A large variety of great complexity products is obtained through the injection of plastics, like:

- electronic products cases;
- electric torque, connectors, nipples;
- special density parts;
- etc.

The dimensions of the parts thus obtained depend on the properties of the tool machines on which they are made (maximum dimensions up to 300mm).

The tools (vulcanization, injection, pressing matrixes, etc.) are designed and made inside the company SC RETROM SA.

The production capacity of the workshop is about 100 hours / day calculated for 8 hours /day for every machine, with extension possibilities through organizing measures.

The Welding workshop, from SC RETROM SA Pașcani, disposes of an adequate endowment for welding different materials through the following methods:

- arc welding using coated electrode;
- arc welding using tube wire;
- arc welding in medium with inert gas using consumable electrode (MIG welding);
- arc welding in medium with active gas using consumable electrode (MAG welding);
- arc welding in medium with active gas using tube wire;
- arc welding in medium with inert gas using tungsten electrode (WIG welding);
- points pressure welding;
- ox gas cutting and welding (acetylene and methane gas).

The devices used for welding processes mentioned above are:

- welding converter CS 500; CS 315;
- acetylene generator UNIVERSAL I-GL00L;
- welding device IUW 400;
- argon backing welding device ISA-300;
- welding device INVERTIG 210 AC/DC DIGITAL;
- welding device MIG/MAG SYNERGIC 424;
- spot welding devices POUTL III;

The qualified personnel working in the welding workshop is also ISCIR and ANR authorized for the execution of welding in normal and nuclear operation conditions.

The work capacity of this workshop is approximate of 150 hours/day, calculated at 8 hours/day for one device, with possibilities of enlargement.

Also, from quality point of view, S.C. RETROM S.A. products respond to the market's requests: they have a strong reputation of top-quality



