Versatile sheet-metal forming technology for producing a wide range of items from sheet metal (aluminum, steel, titanium, copper, brass) up to 3 mm thick

The technology has a number of special features that make it different from common pressure forming:

- Quick readjustment (preproduction term for a new item is 1-2 months);
- Low metal consumption for die tooling and, correspondingly, low cost of the latter (by 3-5 times as compared with traditional dies);
- A possibility for producing small batches of articles (50 and more) while for the common sheet forming technology the minimal batch is 5000 pieces;
- High uniformity of the applied load;
- High efficiency for difficult-to-deform metals and alloys.

Examples of articles produced:

Fig. 1

Fig. 2

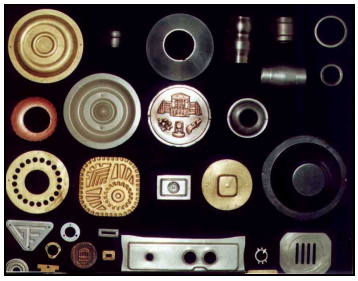

Fig. 3

The technology has been tested and used in different sectors such as engineering industry, aerospace and military industry, shipbuilding and some others.

Our partners:

1. Hungarian mint, Budapest, Hungary,
2. Zak & Kiselbah Company, Stockholm, Sweden,
3. The Tashkent aircraft factory, Tashkent, Uzbekistan,
4. The Kuybyshev engine factory, Kuybyshev, Russia,
5. The Krasnoyarsk instrument making factory, Krasnoyarsk, Russia,
6. The Kharkov aircraft engineering Institute, Kharkov, Ukraine,
7. The Minsk tractor factory, Minsk, Belarus,
8. The S.I.Vavilov instrument making factory, Minsk, Belarus

Brief description of the technology

Sheet-metal forming is performed by a high-pressure pulse, which is created by an impact of rapidly moving striker on an enclosed volume of a liquid or elastic medium that fills the working chamber of a press.

The process is characterized by a short duration of the pressure pulse, 300 to 600 μs, and the absence of a punch; the function of the latter is performed by a transmitting medium (liquid or polyurethane).

The source of energy that is stored in the pressure accumulator of a press is the pressurized air from the compressed-air network of the workshop.

We offer several specialized presses for sheet forming of a variety of materials.