

Firma Tarapata Sp. z o.o.
ul. Wojska Polskiego 3
39-300 Mielec
Poland

Mielec, 5 May 2017

Announcement

The company Firma Tarapata Sp. z o.o. hereby informs that it launches a technical dialogue preceding initiation of the public procurement procedure for the investment "Implementation of an innovative deep drawing technological process for manufacturing of large-dimension articles in Firma Tarapata Sp. z o.o." planned to be co-financed as part of the measure 3.2.2. POIR 2014-2020 Loan for technological innovations.

The Inviting Party expects that as a result of the dialogue, it will be able to acquire information to be used further to define the subject of procurement in more detail, compile appropriate Terms of Reference, estimate the value of the subject of procurement, and specify the offer evaluation criteria taking into account the principles of fair competition.

In particular, it is expected that the dialogue will allow to get to the information about the best, the latest, and the most beneficial solutions to be used further to select the best available offer.

The Inviting Party expects that in the course of the dialogue, the participants will:

- (a) Present their concept of meeting individual requirements set out below in Section 1.
- (b) Define all price-determining components affecting the cost of the investment and present an estimate of the total net value in the form of a preliminary offer.
- (c) Preferably, give examples of similar projects realized by them in the past.

1. Subject

1.1 Technical specification of a hydraulic press

- 1.1.1 Press slide capacity — 8000 kN at the minimum.
- 1.1.2 Dimension when closed — 700 mm.
- 1.1.3 Slide travel — 1000 mm at the minimum.
- 1.1.4 Slide travel length controlled from the operator's panel.
- 1.1.5 Slide working surface area — 1600 mm × 2600 mm at the minimum.
- 1.1.6 T-slots in the slide symmetrical relative to the press table.
- 1.1.7 Number of working cylinders — 2 at the minimum. Slide guides design — attach a short description.
- 1.1.8 Protection against gravitational drop of the slide (SITEMA or equivalent).
- 1.1.9 The function of fast approach and retraction of the slide with the function of gentle braking before the preset position.
- 1.1.10 Adjustable pressing speed at half of the rated capacity allowing to obtain the minimum speed of 30–35 mm/s.
- 1.1.11 Adjustable pressing speed at the rated capacity allowing to obtain the minimum speed of 20–25 mm/s.
- 1.1.12 Press table working surface area — 1600 mm × 2600 mm.
- 1.1.13 Press table thickness — 290 mm at the minimum.
- 1.1.14 The press table provided with 135 holes (closed with caps) in the table for ejector pin Ø50 mm H13 arranged with the pitch of 150 mm × 150 mm to form a mesh symmetrical relative to symmetry axes of the table. T-slots 28 mm × 50 mm spaced by 300 mm and distributed symmetrically along the table length (see Annex No. 4).



- 1.1.15 Height of working table over the floor — 1200 mm at the maximum.
- 1.1.16 Required cushion force — 2000 kN.
- 1.1.17 Number of working cylinders — 2 at the minimum. Cushion guides design — attach a short description.
- 1.1.18 Spring cushion travel in the press table — 400 mm at the minimum.
- 1.1.19 Spring cushion surface area — 2200 mm × 1300 mm.
- 1.1.20 Spring cushion travel length regulated from the operator's panel.
- 1.1.21 Spring cushion equipped with hardened, removable, and replaceable cover plates with hardness 44HRC at the minimum in points of cushion-ejector pins contact.
- 1.1.22 The used hydraulic drive systems as well as slide and spring cushion control systems must offer stepless regulation of pressing force and speed as functions of travel (representation of speed and force curves) within a single press stroke.
- 1.1.23 Main pumps with variable output controlled by means of proportional valves.
- 1.1.24 H-type frame. Determine the maximum dimension between outside walls of columns.
- 1.1.25 Side window dimensions — 1600 mm (width) × 1100 mm (height) at the minimum.
- 1.1.26 The side window not used for die replacement must be protected with removable wire mesh.
- 1.1.27 Touch-screen operator's panel type with diagonal of 14 in. as a minimum.
- 1.1.28 The software must include a graphical user's interface with visualization of current press position, current force values, and force settings for all slides.
- 1.1.29 Force values measured by means of pressure transducers in the hydraulic system
- 1.1.30 Proportional valves control exercised with the use of PWM method; it is inadmissible to use valves with control cards integrated in the valves. The proportional valves should be controlled and the actuation signals generated by the main PLC of the press.
- 1.1.31 The pressing time set from the operator's panel.
- 1.1.32 Memory to store at least 50 recipes.
- 1.1.33 Press strokes counter on the operator's panel.
- 1.1.34 Machine work time counter (defined as the main pumps operating time).
- 1.1.35 Temperature and oil quality control.
- 1.1.36 Material and scrap presence control.
- 1.1.37 8/8 configurable digital inputs/outputs as functions of slide positions; configuration from the operator's panel.
- 1.1.38 Light curtains in front and at the back of the press, the safety system level conforming with PL e.
- 1.1.39 Motors of main pumps supplied with the use of soft starters.
- 1.1.40 The power supply phases voltage, failure, and asymmetry monitoring system.
- 1.1.41 Operator's panel mounted on a rotate & swivel arm in a place safe for the operating personnel.
- 1.1.42 The press equipped with vibration-damping pads or shock absorbers.
- 1.1.43 Automatic lubrication of moveable press components (slide and cushion guides) with oil recirculation and filtration.
- 1.1.44 Oil cooler with fan and option to connect to a cooling water circuit.
- 1.1.45 Hydraulic clamping of the die — 8 pcs. for slide, 8 pcs. for the press table; the required clamping force — 20 kN per piece at pressure of 250 bar.

- 1.1.46 Hydraulic lifting of the die with the use of rollers or balls seated in replaceable T-section strips.
 - 1.1.47 A mobile die replacement system via the press side window: 2 guides mounted on the press side, die sliding in and out with the use of a system driven by a geared motor, maximum die weight — 8 tons.
A single die replacement system should be delivered to serve the two presses. The press should be equipped with an adapter for positioning the die replacement system.
 - 1.1.48 The die replacement system remote control mounted close to the system's arms.
 - 1.1.49 Dimensions of the press side window — 1600 mm × 1000 mm.
 - 1.1.50 Direction of scrap and stamping reception via the main windows — front/back of the press.
 - 1.1.51 Ladder and platform for maintenance-related purposes (location according to the drawing).
- 1.2 Technical specification of a mechanical press
- 1.2.1 Press slide capacity — 5000 kN at the minimum.
 - 1.2.2 Slide travel — 500 mm.
 - 1.2.3 Slide position adjustment — 500 mm.
 - 1.2.4 Slide working surface area — 1500 mm × 2500 mm.
 - 1.2.5 Maximum open height — 1450 mm.
 - 1.2.6 T-slots in the slide symmetrical relative to the press table.
 - 1.2.7 Number of working cylinders — 2 at the minimum. Slide guides design — attach a short description.
 - 1.2.8 Press table working surface area — 1500 mm × 2500 mm.
 - 1.2.9 Press table thickness — 220–240 mm.
 - 1.2.10 Press table provided with T-slots 28 mm × 50 mm spaced by 300 mm distributed symmetrically along the table length.
 - 1.2.11 H-type frame. Determine the maximum dimension between outside walls of columns.
 - 1.2.12 Number of cranks — 4.
 - 1.2.13 Adjustable number of press strokes per minute — from 10 to 20.
 - 1.2.14 Rated number of press strokes per minute at maximum capacity — 12.
 - 1.2.15 The structure allowing to obtain pressing capacity of 2000 kN at height 200 mm above the bottom end center of press slide.
 - 1.2.16 Touch-screen operator's panel with diagonal of 14 in. as a minimum on a rotate & swivel arm.
 - 1.2.17 The software must include a graphical user's interface with visualization of current position of the press slide.
 - 1.2.18 Interface for slide position and speed settings.
 - 1.2.19 Material and scrap presence control.
 - 1.2.20 8/8 configurable digital inputs/outputs as functions of slide positions, configurable from the operator's panel.
 - 1.2.21 Memory to store at least 50 recipes.
 - 1.2.22 Hydraulic overload protection.
 - 1.2.23 Automatic lubrication of moveable press components (applies also to slide and cushion guides) with oil recirculation and filtration.



- 1.2.24 Press strokes counter on the operator's panel.
- 1.2.25 Machine work time counter (defined as the main pumps operating time).
- 1.2.26 Light curtains in front and at the back of the press, the safety system level conforming with PL e.
- 1.2.27 Operator's panel mounted on a rotate & swivel arm in a place safe for the operating personnel.
- 1.2.28 The press equipped with vibration-damping pads or shock absorbers.
- 1.2.29 Hydraulic clamping of the die — 8 pcs. for slide, 8 pcs. for the press table; the required clamping force — 20 kN per piece at pressure of 250 bar.
- 1.2.30 Hydraulic lifting of the die with the use of rollers or balls seated in replaceable T-section strips.
- 1.2.31 A mobile die replacement system via the press side window: 2 guides mounted on the press side, die sliding in and out with the use of a system driven by a geared motor, maximum die weight — 8 tons.
A single die replacement system should be delivered to serve the two presses. The press should be equipped with an adapter for positioning the die replacement system.
- 1.2.32 The die replacement system remote control mounted close to the system's arms.
- 1.2.33 Dimensions of the press side window — not less than 1600 mm × 1100 mm.
- 1.2.34 The press should not require any pit or hollow in the ground. It should be set up on the industrial floor. Working level height above the floor — 1000–1200 mm.
- 1.2.35 Direction of scrap and stamping reception via the main windows — front/back of the press.
- 1.2.36 Ladder and platform for maintenance-related purposes (location according to the drawing).

1.3 A robotized in-process transfer system

- 1.3.1 Three industrial robots with rated lifting capacity of 180 kg each.
- 1.3.2 Robot arms reach radius — 2600 mm at the minimum.
- 1.3.3 Each of the robots installed on a 700-mm high steel stand bolted to the floor. Height of the stand and the arm reach radius should follow from an analysis of the robot–press–stacking/loading area working space.
- 1.3.4 Each of the robots equipped with two ejectors, compressed air pressure failure sensor, and independent vacuum sensors for each of the ejectors.
- 1.3.5 Independent control cabinets and manual programming panels for each of the robots.
- 1.3.6 Hazardous spaces must be protected by means of wire mesh fencing, supervised gates, and optoelectronic barriers.
- 1.3.7 The stampings stacking area should be equipped with belt conveyors (3 pcs.) transporting finished articles beyond the hazardous zone. Conveyor width — 1000 mm at the minimum; carrying capacity — 30 kg; adjustable working height — from 700 mm to 1000 mm; belt conveyor speed — adjustable in the range from 10 m/min to 30 m/min.
- 1.3.8 The belt conveyor No. 3 should be equipped additionally with a flat level surface used to ensure uniqueness of the position of pressings after die shearing and before the piercing operation.
- 1.3.9 Each of the belt conveyors should be equipped with a sensor detecting presence of pressings in the extreme end position resulting in stopping the conveyor.

- 1.3.10 Each of the belt conveyors must be switchable between forward and reverse movement direction. On the operator's side, conveyors must be equipped with control buttons.
- 1.3.11 The loading zone must be equipped with a system of predefined positioning of the input material (blanks), a blank presence sensor, and a system of detection of a superfluous blank.
- 1.3.12 **The whole of the system must be integrated with the two presses of Sections 1.1 and 1.2.**
- 1.4 A conveyor for receiving scrap from sheet metal pressing.
2. Place of delivery and commissioning of the subject of Invitation:
Firma Tarapata Sp. z o.o.
ul. COP 15
39-300 Mielec
Poland
3. Deadline for implementation of the technological process: 30 June 2018.
4. Payments: 30% (prepayment), 50% (after declaration of readiness for shipment), 20% (after commissioning and signing the acceptance protocol).
5. The company Firma Tarapata informs that additional scores will be awarded for offers addressing environment-related issues.
6. The invited entities take part in the technical dialogue at their own expense and risk.
7. The submitted preliminary offers shall not be returned.
8. A pictorial view of arrangement of the machines is presented in **Annex No. 1** to this Invitation.
9. A brief description of the technological process is presented in **Annex No. 2** to this Invitation.
10. A drawing showing an existing structural pit dedicated for transport of scrap is included in **Annex No. 3** to this Invitation.
11. A drawing showing the hydraulic press table constitutes **Annex No. 4**.

The person designated for contacts with Oferrers: Mr. Marek Mazur, Tel. +48 17 7881514, e-mail: tomasz.klag@tarapata.com .

Preliminary offers can be submitted 23 May 2017 at the latest by means of electronic mail to the address tomasz.klag@tarapata.com .

Yours faithfully,

Tomasz Klag