TECHNICAL OFFER	MADE BY THE TENDERER: <_____> *(INSERT TITLE, ADDRESS)*

Minimum specifications which must be handled by all the equipment listed below:	
Material specification	: DD11 or S235JRG Steel
Minimum width of rim	: 5"
Maximum width of rim	: 13"
Minimum diameter of rim	: 12"
Maximum diameter of rim	: 20"
Minimum thickness of rim	: 2.5 mm
Maximum thickness of rim	: 5 mm
Maximum weight of wheels	: 70 kg
Line production capacity	<PLEASE INSERT OFFERED CAPACITY>
Expected uptime	: 24 hours/day - 4 shift pattern
Warranty	<PLEASE INSERT DURATION OF WARRANTY>
Spare parts support	<PLEASE INSERT OFFERED SPARE PARTS SUPPORT>
Remote support	<PLEASE INSERT RESPONSE TIME>

INSTRUCTIONS: The tenderers are requested to complete the template below:
• Column SPECIFICATIONS REQUIRED is completed by the contracting authority and it shows the required specifications (not to be modified by the tenderer),
• Column SPECIFICATIONS OFFERED is to be DULY filled in by the tenderer and must detail what is offered (each offered specification must be in line with the specification required). The offered equipment may be of the same standard or better than required. If ANY SPECIFICATION OFFERED IS NOT IN LINE WITH THE SPECIFICATION REQUIRED, THE OFFER WILL BE REJECTED!
• Column Notes, remarks allows the tenderer to make comments on its proposed supply and to make eventual references to the documentation attached (brochures, catalogues, pictures, technical data etc., if any)
The documentation supplied should clearly indicate brand and the models offered (highlighted) and the options included, if any, so that the evaluators can see the exact configuration. Offers that do not permit to identify precisely the models and the specifications may be rejected by the evaluation committee.
Column NOTES BY EVALUATORS is intended only for the evaluation procedure (tenderers may not enter any information in this column)

Item nr	SPECIFICATIONS REQUIRED	SPECIFICATIONS OFFERED (DETAILED DESCRIPTION, INCLUDING AN INDICATION OF THE BRAND AND MODEL)	NOTES, REMARKS, REFERENCE TO DOCUMENTATION, IF ANY	NOTES BY EVALUATORS *(not to be filled in by the tenderers)*
1	**High volume wheel line machine for less steel and less CO2** (Rim Rolling Machine): Complete Rim Rolling Line (multi-stage, including coolant recycling system and air curtain for drying) including 1 set of tooling - Line should be specially designed for the forming operation of the rim. Groups of machines are as stated below. • Rim Rolling Machine (2 pcs.) • Loading & Unloading Group (from conveyor to Rim Roller-1 & from Rim Roller-2 to exit station) • Rim Transfer Group (from Rim Roller-1 to Rim Roller-2) • Hydraulic Power Pack • Pneumatic Control System • Coolant System • Electric Control Cabinet Rim roller machine, there should be upper and lower shafts with closed ends. The upper shaft should be move up and down, and the lower shaft should be move back and forth. The rim should be formed in 2 operations with the tooling attached to the shafts. The line should be positioned into maximum area 7500 x 4000 mm with all accessories. The height of the machines should be limited maximum as 4000 mm. Total electric power requirement for the line should be maximum 250 kW. Rim roller machine should be fixed on the floor without any pit requirement. Pit and collecting channels can be provided only for coolant system.			
2	**Pick & place robot -** start of line (1 piece) **-** Maximum reach should be 2700 mm. Maximum payload should be 165 kg. Maximum rate load should be 120 kg. KUKA robot will be preferable. Robot should be supplied with steel construction robot base to fix robot on the floor. Robot should be supplied with all of necessary electric control cabinet and necessary accessories.			
3	**Transfer robot -** rolling machine to calibration (1 piece) - Maximum reach should be 2700 mm. Maximum payload should be 275 kg. Maximum rate load should be 210 kg. KUKA robot will be preferable.			

	Robot should be supplied with steel construction robot base to fix robot on the floor. The suitable "double" gripper system should be designed to transfer formed rim bodies from rim rolling machine to calibration press and to transfer calibrated rim bodies from calibration press to idle station. Robot should be supplied with all of necessary electric control cabinet and necessary accessories.			
4	**Transfer robot -** calibration/assembly/valve press (1 piece) - Maximum reach should be 2700 mm. Maximum payload should be 165 kg. Maximum rate load should be 120 kg. KUKA robot will be preferable. Robot should be supplied with steel construction robot base to fix robot on the floor. The suitable "single" gripper system should be designed to transfer calibrated rim bodies from idle station to assembly press. Additionally, in between the route the robot should be parked the rim under valve hole punching press for valve hole punching process. Robot should be supplied with all of necessary electric control cabinet and necessary accessories.			
5	**Transfer robot -** valve press to weld station to transfer track (1 piece) - Maximum reach should be 2700 mm. Maximum payload should be 275 kg. Maximum rate load should be 210 kg. KUKA robot will be preferable. Robot should be supplied with steel construction robot base to fix robot on the floor. Robot should be supplied with all of necessary electric control cabinet and necessary accessories.			
6	**Transfer robot** - transfer track to palletizer (1 piece) - Maximum reach should be 2700 mm. Maximum payload should be 165 kg. Maximum rate load should be 120 kg. KUKA robot will be preferable. Robot should be supplied with steel construction robot base to fix robot on the floor. Robot should be supplied with all of necessary electric control cabinet and necessary accessories. * All robots listed above must be compatible with Siemens Simatic / KUKA control system			
7	**Weld Seam Detecting Table** (based on plasma weld technology, with future compatibility for butt welding) The unit should be positioned just after rim rolling line before calibration process. The formed rim bodies should be taken automatically to the station (from rim rolling exit conveyor) and clamped by pneumatic system from the side. After that the servo motor & drive system should be rotated the rim automatically and welding seam should be detected by suitable welding detector. Once welding seam is detected the rim should be stopped at requested angle/position. The unit should be positioned into maximum area 1750 x 2500 mm with all accessories.			
8	**Automation transfer equipment pre-process** (roller track & automated loading/unloading of existing flare press) - The suitable "single" gripper system should be designed to transfer rounded & welded rim bodies from conveyor to flare press and to transfer flared rim bodies from flare press to rim rolling line entry conveyor. Additionally, robot should be capable to load welded rims on the dedicated wooden pallets. The gripper design should be done taking existing flare press & flare tooling and entry conveyor conditions. The gripper should be fit for all sizes of rims which are mentioned in Section 2.3. The gripper system should be suitable with 120 kg rate load & 2700 mm maximum reach pick & place robot. The necessary intelligent part recipe design at HMI and routing of the robot for all types of rim types should be provided.			
9	**Automation transfer equipment post-process** (roller track & automated loading/unloading of discs/weld tables/edge roller/palletizer) -			

	The suitable “double” gripper system should be designed to transfer assembled rims from assembly press to rim welding stations and to transfer welded rims from welding stations to rim transfer conveyor. The suitable “single” gripper system should be designed to transfer produced finished wheels to load from conveyor on the wooden pallets. The gripper design should be done taking related machine/station/conveyor conditions. The gripper should be fit for all sizes of rims which are mentioned in Section 2.3. The “double” gripper system should be suitable with 210 kg rate load & 2700 mm maximum reach robot. The “single” gripper system should be suitable with 120 kg rate load & 2700 mm maximum reach transfer robot for palletizing. The necessary intelligent part recipe design at HMI and routing of the robot for all types of rim types should be provided. The linear disc loading system should be designed and supplied for loading discs to assembly press for rim & disc assembly process. The automation system should be synchronized with assembly press.			
10	**High volume line machine tooling** Extra 3 tool sets for rim rolling machine -			
	The rim rolling process steps should be created by supplier in accordance with “Starco” provided drawings. All rim rolling tool sets should be designed according to created rim rolling process details. All rim rolling tool sets should be suitable for rim rolling line machines main shaft and stroke dimensions. All active forming parts should be produced from West Europe origin 1.2379 cold tool steel. All active parts should be vacuum hardened to 58-60 HRC. All parts should be delivered with quality control reports prepared by supplier. All raw material certificates and heat treatment reports should be provided along with tools. * All machines should be supplied with safety fences & equipment according to EU regulations (CE mark & * Delivery, spare parts list, manuals in local language (Croatian), documentation, installation, training - **To be included in price**			

Signature:	**Date:**

FINANCIAL OFFER	MADE BY THE TENDERER: <_____ _____> *(INSERT TITLE, ADDRESS)*

INSTRUCTION

(Tenderers may not change the text under Item, Units or Number of Units/Quantity!
All unit prices must be inserted/ all items must be offered If a single unit price is lacking,
the tender will be rejected! Do not change the content of the template. Adding of rows in the financial offer is not allowed.)

item nr.	ITEM	UNIT	NUMBER OF UNITS/ QUANTITY	UNIT PRICE	TOTAL PRICE
1	**High volume wheel line machine for less steel and less CO2** (Rim Rolling Machine): Complete Rim Rolling Line (multi-stage, including coolant recycling system and air curtain for drying) including 1 set of tooling -	pcs / set	1		0
2	**Pick & place robot -** start of line (1 piece) **-**	pcs.	1		0
3	**Transfer robot -** rolling machine to calibration (1 piece) -	pcs.	1		0
4	**Transfer robot -** calibration/assembly/valve press (1 piece) -	pcs.	1		0
5	**Transfer robot -** valve press to weld station to transfer track (1 piece) -	pcs.	1		0
6	**Transfer robot** - transfer track to palletizer (1 piece) -	pcs.	1		0
7	**Weld Seam Detecting Table** (based on plasma weld technology, with future compatibility for butt welding) -	pcs.	1		0
8	**Automation transfer equipment pre-process** (roller track & automated loading/unloading of existing flare press)	pcs.	1		0
9	**Automation transfer equipment post-process** (roller track & automated loading/unloading of discs/weld tables/edge roller/palletizer)	pcs.	1		0
10	**High volume line machine tooling** Extra 3 tool sets for rim rolling machine	pcs.	1		0

TOTAL AMOUNT WITHOUT VAT	**0**
VAT AMOUNT	
TOTAL AMOUNT WITH VAT	**0**

(in case the tenderer is not in the VAT system, the cell VAT amount is filled in with 0)

REMARK:

* All machines should be supplied with safety fences & equipment according to EU regulations (CE mark & appropriate documentation) - **It is included in the price**

* Delivery, spare parts list, manuals in local language (Croatian), documentation, installation, training - **It is included in the price**