

# Reliable Technology

Acero de los Andes has a professional and highly qualified experienced staff, with specialized engineering and cutting-edge software, fully equipped and suitable industrial facilities, plus an integrated quality system, allowing us to make reliable products, meeting all international quality standards and the requirements of the most demanding customers.

As part of strategic planning, our alliances are made with top international companies, which promote technological innovation and guarantee to provide integral and reliable solutions in highly complex projects.

## Quality Certificates ISO 9001-2008, ASME U, U<sub>2</sub>, S, R



Management and Quality Control procedures that meet the highest international standards and certifications.

## Corporate Group

IAA is an important part of Ecuadorian Business Group, which in close partnership with affiliated companies, form a value chain, integrating: engineering, manufacturing, construction, assembly, automation and control, logistics and services that ensure the provision of high quality solutions .



Engineering - Procurement - Construction



ACERO DE LOS ANDES  
Engineering - Manufacturing - Assembly



Automation - Control

## Business Sectors

### Oil and Gas

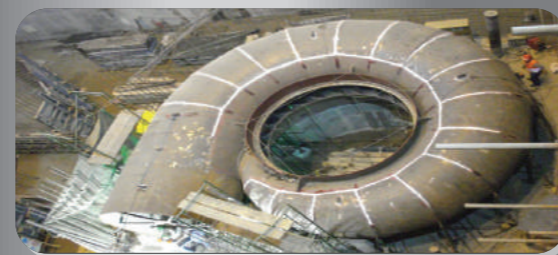


Oil Flash Vessel - OXY



Auto-tank of 54 m3 for LPG - AGIP

### Energy



Hydroelectric Power Station - MAZAR



Guemes Thermal Power Station - PAMPA ENERGIA

### Industrial



Planta de Humos - ADELCA



Industrial Plant - INTERQUIMEC

### Infrastructure and Mining



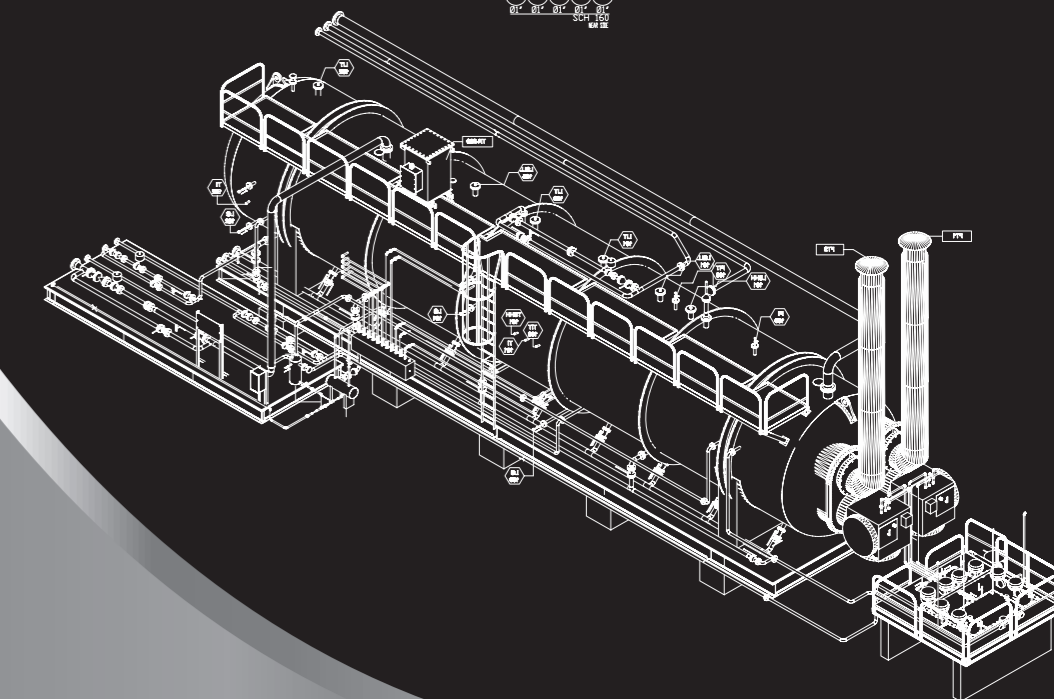
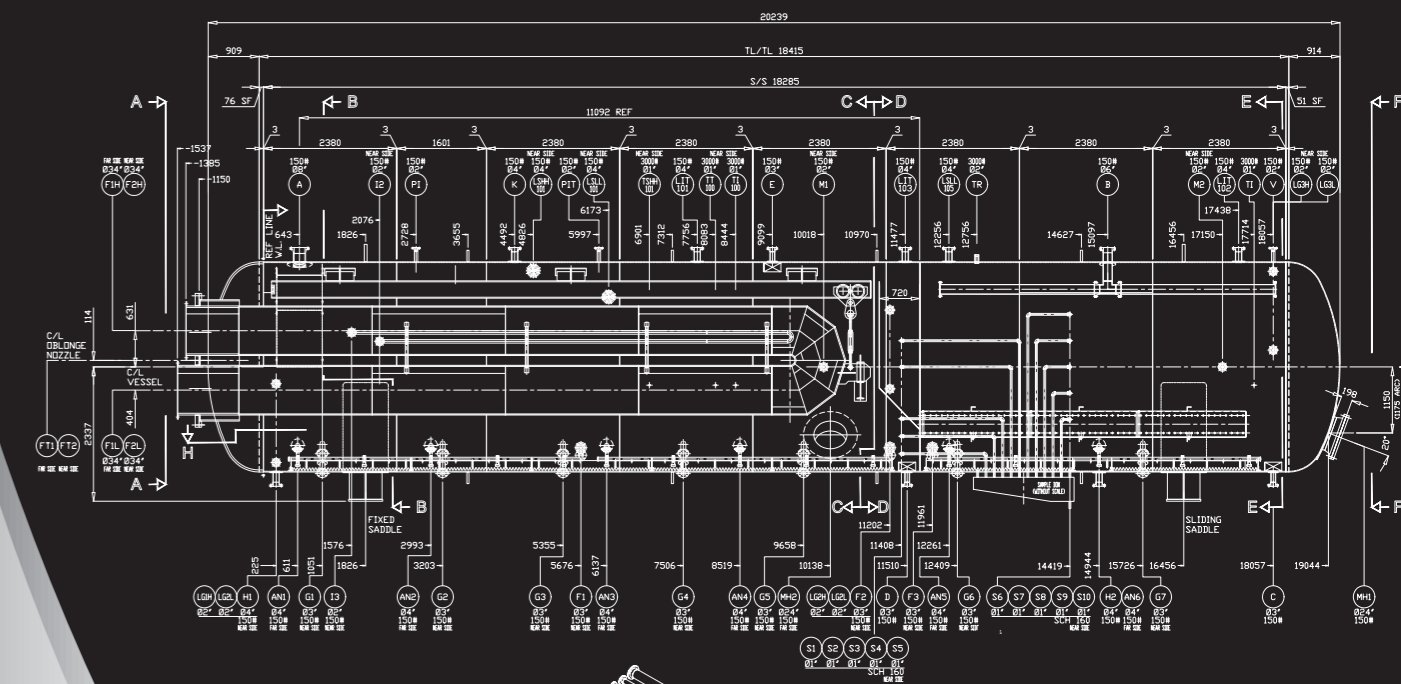
Trusses Guayasamin Tunnel - CARTELLONE



Washing Plant for Alluvial Gold - ECUMINAS

# ACERO DE LOS ANDES

Towards new challenges ...



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# Trajectory

IAA has manufactured capital goods with metal-mechanic content, equipment and facilities for oil and energy projects of great relevance implemented in Ecuador, such as first and second extension of the Esmeraldas refinery, construction and first expansion of the Amazonas refinery, production facilities oil in the Ecuadorian Orient, Mazar hydroelectric projects, Paute, Agoyán, among others.

Since 1992, IAA has entered into the regional market exporting process equipment, pressure vessels and storage tanks to Argentina, Brazil, Bolivia, Peru, Colombia, Venezuela, Central America and the Caribbean.

Product of technological development reached during our business growth in 2009, IAA achieved the first export of distillation towers, high-tech refinery in the Middle East and Africa, an event that promises to achieve more ambitious projects in the coming years.

## Experience, Innovation and Leadership in the Manufacture of Capital Goods

1976



**Tanque T-01 - CEPE**  
The first flagship project was the construction of the 01 tank to CEPE of 60,000 BBL of oil storage capacity.  
ECUADOR

1992



**Manifolds - Bolivia**  
IAA export activity, began in 1992 with the export of 2 Manifolds ANSI 300 # to Bolivia, a market hitherto supplied only by the Southern Cone countries and the United States.  
**Client:** Yacimientos Petrolíferos fiscales de Bolivia.

1999



**Process Equipment Brasil**  
A few months after the peace treaty with Peru, IAA used Amazonian waterways to export 20 process equipment, to Manaus Brazil for PETROBRAS refinery in that city.  
**Client:** Confab - BRASIL

2005



**Electrostatic Heater Ecuador**  
Electrostatic Heater Treater  
Pressure 100 PSIG, Capacity 10,000 BFPD  
12 MM BTU/h with ASME Stamp  
**Client:** City Oriente - Petreco - USA



2008



**Atmospheric Tanks Colombia**  
23 API 650 Tanks with capacities from 5,000 to 20,500 BBL to BBL for Proyecto La Cira Infantas en Barrancabermeja.  
**Client:** OxyAndina - COLOMBIA

2009



**Refining Columns and Process Equipment**  
Oil Distillation towers for AMAKPE refinery in Nigeria, with an initial capacity of 6,000 BBL / day and for KAR refinery in Iraq, with a capacity of 20,000 BBL / day  
**Client:** Ventech Engineering - USA

2010



**Salt Oven Ecuador**  
Salt Oven for Gas Plant CIS., with gas processing capacity of 7,000 m3 / h.  
**Client:** EP Petroecuador - ECUADOR

2011



**Cameras Flash Ecuador**  
2 Cameras Flash for Refinery La Libertad water desalination capacity of 8,000 gls / h.  
**Client:** EP Petroecuador - ECUADOR

## Production Facilities

IAA has an Integrated and highly equipped Manufacturing Plant to develop various production processes including cutting, forming, machining, welding, heat treating, painting, non destructive testing, among others.

Manufacturing Area	10.000 m2
Warehouse	1.500 m2
Courtyard Storage	10.000 m2
Green Areas and Circulation	13.000 m2
<b>Total Area</b>	<b>34.500 m2</b>



## Plant Equipment



**Paint Booth Pressurized and Climatized**  
Dimensions 6m H. x 6m W. 18m D.  
2 Burners LPG



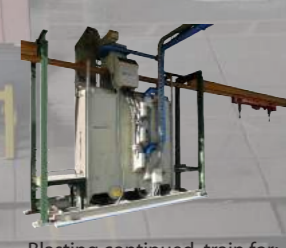
**CNC Rolling Machine**  
Supports Conical Shaped  
Max. Capacity in Cold Forming 100mm.



**CNC Cutting Table**  
For Oxyfuel and Plasma  
14x2.5 meters useful area.



**Gantry for Welding and Positioners**  
Longitudinal Displacement 3.5m automatic.  
Vertical Displacement 3m automatic.



**Blasting continued train for:**  
Sheets, Pipes and Outlines  
Dimensions 8m H. x 6m D. x 4m de W.  
It has 6 turbines of 20 HP.



**Automatic Weldings of Submerged Arc.**  
Power Supply DC-1000  
Feeder NA55



**Radial Drill**  
Turning Radius 2200 mm.  
Velocidad de 4 a 1420 rpm



**Bridge Cranes**  
With a combined capacity of 60 tons



**Flanging Machine**  
Maximum Thickness 1"  
Maximum diameter 6m



**Stress Relief Oven.**  
High temperature 750° C.  
Internal Dimensions: 6m H x 4.5m W x 14m D.



**Horizontal Lathe.**  
Turning diameter of 4 m on the pit  
Max turning diameter, 2m on the bedplate.



**Vertical Hydraulic Press**  
Capacity of 300 tons.  
Vertical displacement 1m.

## Major Product Lines and Services

Process Equipment for the Oil Industry	
➤ Oil Flash Vessels.	➤ Multiphase Separators.
➤ Oil and Gas Separators.	➤ VRU Knock Out Drum.
➤ Oil and Gas Heaters.	➤ Flare Knock Out Drum.
➤ Electrostatic Treaters.	➤ Crude Oil Degasser.
➤ Heat Exchangers.	➤ Free Water Separators.
➤ Columns / Towers Distillation, Fractionation, Deisopentimizer.	➤ Reflux Accumulator.

Atmospheric Tanks	Pressure Vessels
➤ Oil Storage Tanks and their Derivatives API 650, 12D, 12F, API 620.	➤ Storage Vessels for: LPG, CO <sub>2</sub> , NH <sub>3</sub> , H <sub>2</sub> , etc.
➤ Elevated Water Storage Tanks AWWA 210.	➤ Stationary Vessels.
➤ Cone roof tanks, Self-supporting dome, Floating Aluminum Dome.	➤ Tankers for: LPG, CO <sub>2</sub> , NH <sub>3</sub> , Fuel and Cement.
➤ Underground Storage Tanks for Fuel.	➤ Gas Boot.
	➤ Air Compressed Vessels
	➤ Spheres.

Heavy Structures	Pressure Pipes
➤ Bridges.	➤ Pig Launchers & Receivers.
➤ Gantry Crane	➤ Manifolds.
➤ Telescopic Structures.	➤ Fireplaces.
➤ Package skid.	➤ Ducts.
➤ Skids for Chemicals Injection.	➤ Pressure Pipes Hydromechanical components.
➤ Pipe Racks.	➤ Spools Prefabrication.
➤ Ladders and Platforms.	➤ Fire Tube Lines.
➤ Tunnel Trusses.	

Services Line
➤ Modifications and repairs with Certificate ASME U and R.
➤ Blasting with metal particles for large equipment, using turbines for flat plates and cabins (6mx4mx18m).
➤ Painting in a pressurized cabin and climatized.
➤ Localized heat treatment and furnace for large equipment.
➤ Inspection of new equipment and manufacturing process.
➤ Mechanical assembly of API tanks and pressure vessels.
➤ Installation of equipment in the field.
➤ API Tank Repairs with API 650 Inspector