

TURN-KEY SYSTEMS



CUSTOM DESIGN



ENGINEERING

FABRICATION

“From ultra-pure water treatment equipment to enhanced heavy-crude production facilities, this catalogue illustrates our capabilities and range of expertise.”

Tecnolog through its Technology, since 1967, is the leader in the design and fabrication of the Once Through Oilfield Type Steam Generators and has supplied quite a few of steam generators installed worldwide.

Tecnolog/APIN™ Steam Generators have been in operation since the inception of steam flood technology.

Tecnolog/APIN™ steam generators supplied

APIN™ is the only steam generator designer/manufacturer that is staffed by some of the original engineers whom now hold key positions at Tecnolog. Our staff of high caliber engineers, designers, fabrication specialists, and service technicians has combined experience of over 100 years in APIN™ steam generator design. **APIN™** has Packaged Steam Generator capabilities to 400,000 pph as well as Field Erected APIN Boilers to +1MM pph.

**APIN™** /Tecnolog Reverse Osmosis System



- STEAM GENERATION
- WATER TECHNOLOGIES
- FABRICATION



APIN™ Gas Fired Heater Package

“Experienced in providing specific engineered packages, our designs or yours, to accommodate your operational and production requirements.”

## KEY CONTACTS

### FABRICATION

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# FABRICATION FACILITY & CAPABILITIES



## WELDING CAPABILITIES:

Process Procedures	Number	Manual	Semi-Auto	Code Compliance	Backing
SMAW	(2) P#1	X		ASME IX	NO
SMAW	(2) P#8	X		ASME IX	NO
FCAW	(2) P#1		X	ASME IX	NO
GMAW	(2) P#1		X	ASME IX	NO
GMAW	(2) P#8		X	ASME IX	NO
SAW	(2) P#1		AUTO	ASME IX	YES
SAW	(1) P#8		AUTO	ASME IX	YES
GTAW	(2) P#1	X		ASME IX	NO
GTAW	(2) P#8	X		ASME IX	NO
GTAW	(1) P#42	X		ASME IX	NO
GTAW	(1) P#44	X		ASME IX	NO
GTAW	(1) P#45	X		ASME IX	NO

## CUTTING, GOUGING AND BEVELING METHODS EMPLOYED:

Air/Arc Carbon Gouge	Plasma Arc Cutting and Beveling
Oxy/Acetylene Cutting and Beveling	1/2" x 10' Shear
4 Torch Eye Machines	Do-All Saw w/rails and cooling
Track Burners	90 Ton Iron Worker
24" Chop Saw w/rails and cooling	3/8" x 10' Break

## MANIPULATOR / POSITIONING EQUIPMENT:

3 - Manipulator/Sub-Arc	10 - 200# Positioner
1 - 500# Positioner	1 - 5000# Positioner
1 - 10,000# Positioner	2 - 5 Ton Turning Rolls with Idler
3 - 10 Ton Turning Rolls with Idler	1 - 20 Ton Turning Rolls with Idler
2 - 30 Ton Turning Rolls with Idler	

## PIPING MATERIALS:

Carbon Steel	Chrome
Hastelloy	Monel
Nickel Clad	Stainless

## SPECIALIZED CAPABILITIES:

Rolling Equipment	: 2" x 12' plate roll,
Machining Lathes	: 60" Dia x 12 ft
Milling & Drilling unlimited with CNC Equipment	
Tube Bender	: 1 1/2" to 3" O.D. - 3" to 18" radius

## ELECTRICAL:

Climate Controlled Building 30' x 40'  
 Electrical/Control (systems, enclosures, logic controllers, etc.)  
 System Design  
 Programmable Logic Controllers

## BLASTING and PAINTING: Enclosed

Blasting Building 40' x 80' Climate  
 Controlled Paint Building 40' x 80'

## NDT - NON-DESTRUCTIVE TESTING:

Sub-contractor testing on-site



# TECNOLOG s.a.



4—**APIN™** 50 MM BTU/HR Once Through Steam Generators ready for shipment, each with its own **APIN** water treatment system.



25 MM BTU/HR  
Trailer Mounted  
Steam Generator



250 MM BTU/HR  
Once Through Steam Generator  
During Assembly





APIN/Tecnolog  
DESIGNED  
and  
FABRICATED

OTSG  
50MMBTU/HR,  
2600 psig discharge  
pressure, dual oil/  
Gas fired, skid  
mounted.

CHINA NATIONAL PETROLEUM  
LIAO HE FIELD

**APIN™** Once through, single pass, direct fired unit consisting of a combination chamber radiant section, convection section and burner system complete with all necessary valves and safety Equipment required for safe and Efficient operation.



PETROBRAS—ALTO DO RODRIGUES FIELD, BRAZIL  
Waste Heat Recovery **APIN™** Steam Generator — 50 MM BTU/HR, 1500 Psig Discharge Pressure  
Design, fabrication, transport, installation and training all by qualified Tecnolog personnel.

# TECNOLOG



**APIN™** 250 MM BTU/HR Nominal  
One of Four During Assembly  
on site.

**APIN™** Once Through Steam Generator  
Six Pass, 1450 Psig Discharge Pressure  
Gas Fired, Skid Mounted

Engineered, Designed, and Fabricated  
for Assembly On-Site





## APIN UPS & EORSG STEAM INSTALLATIONS

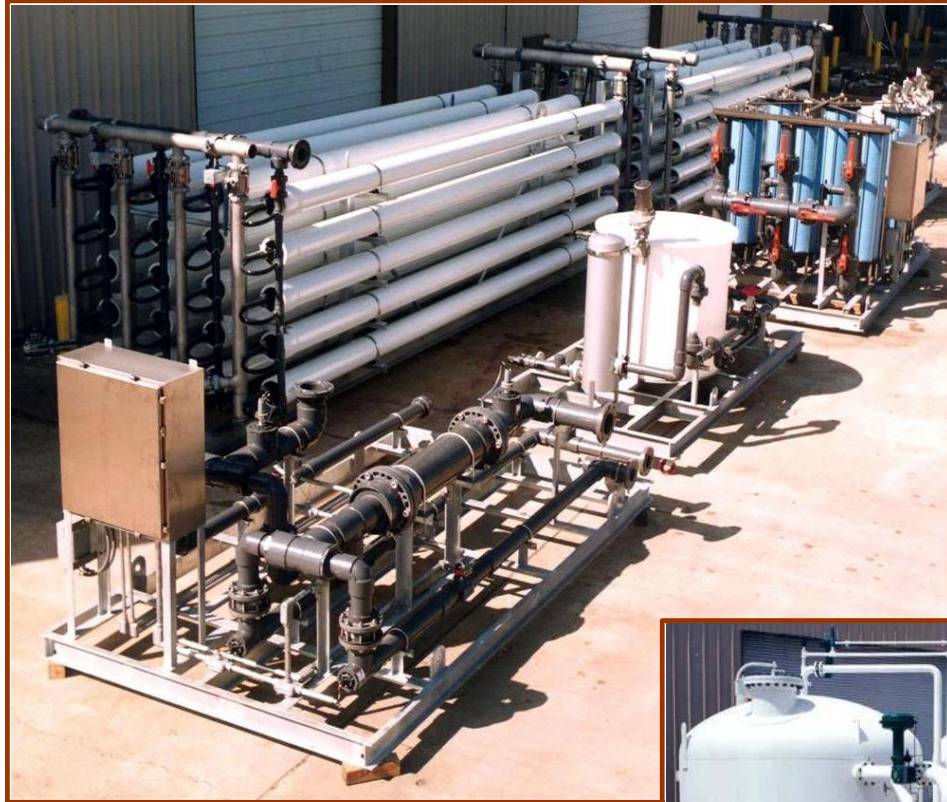


**APIN UPS System for APIN EORSG support.**



**APIN™ EORSG located at East Texas oilfield**

**Tecnolog** *moved to a new 110,000 ft<sup>2</sup> (10,000 m<sup>2</sup>) manufacturing plant*



**APIN™** RO System with Chemical Cleaning Skid and Control Panel.

**APIN™** Multi-Media Filtration System



Sets of Tecnolog Dual Bank Water Softener and Chemical Feed Systems for **APIN™** Oil Field Steam Generators.

