



**Heritage Global Partners**

Asset Advisory and Auction Services

*A Legacy since 1937*



**BOEING®**

*Forever New Frontiers*



## **SEALED BID SALE**

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*Multimillion Dollar Original Cost:*  
Ipsen Horizontal Loading Vacuum  
Titanium Stress Relief Furnace

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November 24, 2010 - 8:00 am PST

January 24, 2011 - 5:00 pm PST

**[www.HGPauction.com](http://www.HGPauction.com)**



## Heritage Global Partners

Asset Advisory and Auction Services  
A Legacy since 1937

### Sealed Bid Sale:

On Behalf of:



### Sale Commences

November 24, 2010 - December 24, 2011

#### Auctioneer's Note:

HGP is pleased to be selected to conduct this Sealed Bid Sale of assets of The Boeing Company.

This Sealed Bid Sale will feature a well maintained Ipsen Horizontal Loading Vacuum Titanium Stress Relief Furnace. Successful buyer's rigging and transportation vendor will need to adhere to the Boeing Service Provider Manual and its expressed and explicit rules and regulations.

**Final Removal Date February 1, 2011**

Export Law Compliance: Buyers agree to comply with all United States export control and related laws, and acknowledge that HGP is not the exporter of any purchased item. Certain items offered for sale at the Auction or Sealed Bid Sale may constitute "Restricted Technology." Under federal law, such items may not be shipped outside the United States. Buyer also agrees to not export any item to Countries which are subject to comprehensive embargoes or support for terrorism, currently, Cuba, Iran, North Korea, Sudan, or Syria, as the same may change from time to time. HGP makes no representation or warranty concerning, and has conducted no investigation to ascertain which items, if any, constitute Restricted Technology.

#### Preview and Inspection:

All parties interested in attending the dedicated preview and inspection date on Wednesday December 22nd, will need to contact David Barkoff at +1 (650) 759 2242.

**12200 Monarch Street  
Garden Grove, CA 92841**

#### Contact:

All Interested Parties Should Contact:

David Barkoff  
email: [dbarkoff@hgpauction.com](mailto:dbarkoff@hgpauction.com)  
phone: +1 (650) 649-0147

Sale will be conducted in English and will accept only U.S. CURRENCY.



## Ipsen Model HR-40x48x240

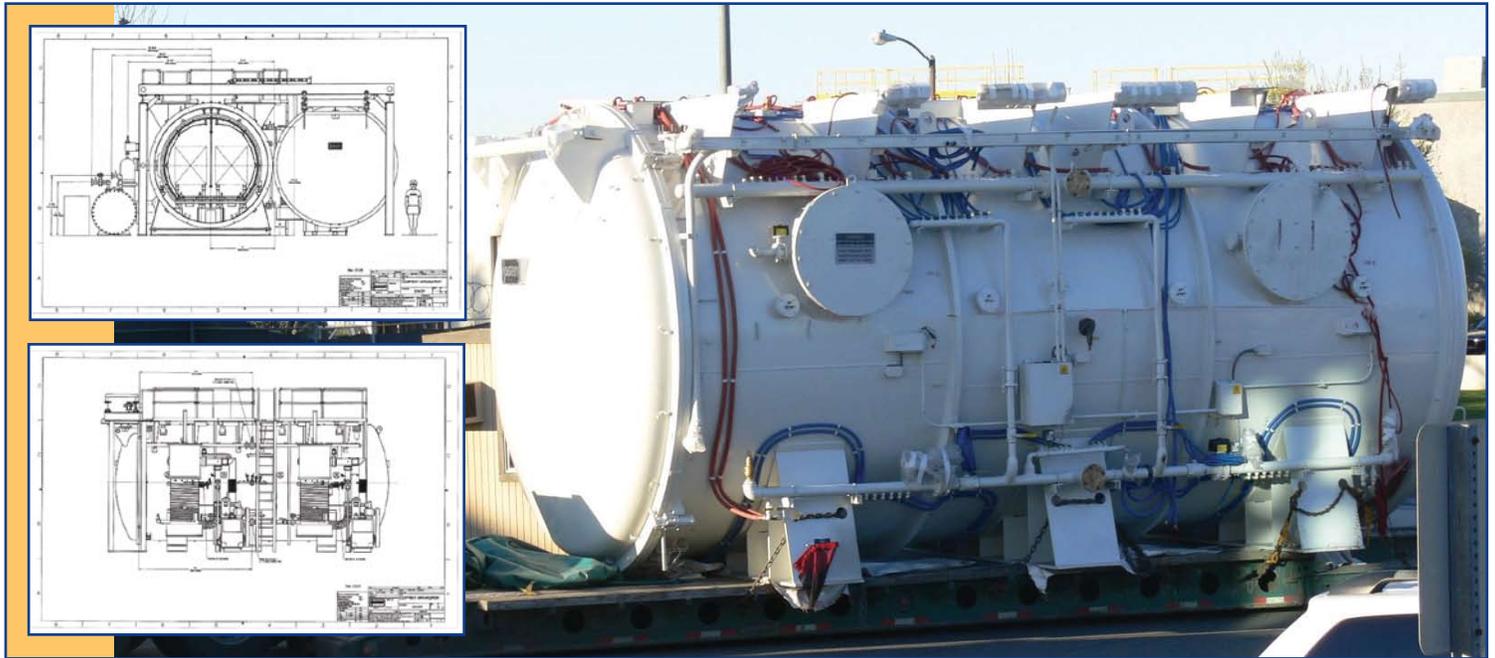


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#### Instrumentation and Control System

- A. Cabinet mounted PC with color touch-screen and control display.
- B. Eight (8) Honeywell over-temperature controllers.
- C. Eight (8) Honeywell temperature controllers.
- O. Ipsen Hot Zone Digital-Trim Control System.
- E. Allen Bradley PLC Programmable controller 10 perform all furnace sequencing and alarm functions.
- F. Active cold cathode vacuum gauges for high vacuum measurement
- G. Active pirani gauges for low vacuum measurement.
- H. Type-N thermocouples for zone temperature controls.
- I. Type-N thermocouples for over temperatures.
- J. Modem for remote diagnostics and troubleshooting by Ipsen Inc.
- K. Cabinet lighting and air conditioner for PLC control and recorder cabinets.
- L. Forty-eight (48) point type-N workload thermocouple jack panel with vacuum feed throughs.
- M. Digital process recorders for temperature recording.
- N. Heavy duty UPS system for control cabinet.
- O. USB, Ethernet, mouse, and keyboard ports
- P. Switchboard for power distribution to the furnace.
- Q. Argon step down transformers for 125 hp gas cooling motors.

# Ipsen Model HR-40x48x240-1-Bar Horizontal Loading Vacuum Titanium Stress Relief Furnace



## Vacuum Furnace

- The furnace work area will be divided into two work zones, each side will accommodate a fixlured load stack measuring 40~ (1016 mm) wide, 48" (1219) high, 240" (6096 mm) long.
- Furnace gross load weight capacity of 22,000 pounds (9979 kg), 11,000 pounds per side at 1,450°F (788°C)
- Normal operating temperature range between 900°F {482°C} to 1A00°F (760°C). Maximum temperature for bake out/clean-up operation 1,450°F (7SS"q)
- The furnace chamber is round, double-wall, water cooled, of carbon steel construction. The inner wall is coated with a low out-gassing, rust preventative, and high temperature paint.
- Sliding front door assembly, with hinge mounted rear door.
- The hot zone is modular with multiple sections. Each section consists of a carbon steel angle frame with 1" of graphite board with 0.015~ grafoil hot face backed with 1" of graphite felt and side graphite heating elements. A vertical graphite heating element runs longitudinal between the two work zones.
- There will be eight (8) individually trimmed heating zones, utilizing the Ipsen Digital-Trim Control System. Temperature uniformity is  $\pm 2SG F$  (13.8GC) above 900°F
- Power to heating elements is provided by a Variable Reactance Transformer (not UL Listed) rated at 1,200 KVA total, which is divided into eight (8) separate zones.
- The work load is supported by graphite hearth rails.
- The entire furnace system is painted Ipsen light grey machine enamel or machine enamel of other color as specified by the customer.

**Model Number: HR-40x48x240-1-Bar**

**Serial Number: Bp2028**

**Manufacturing Date: January 24, 2009**

## Vacuum Pumping System

- Two (2) Stokes Model 1738-VFD (300f2, 000 CFM) mechanical/blower pump systems with variable frequency drive to the blower and two (2) BOC Edwards 291-J series exhaust filter.
- Two (2) Varian Model HS-35 diffusion pump systems and DC-704 pump oil
- Two (2) Varian Model DS-402 rotary vane holding pumps
- Maximum Operating Pressure: 5.0 x 10.5 Torr
- Pump Down rate: From atmosphere to  $5 \times 10^{-5}$  torr in 30 minutes or less.
- Leak-up rate: 4 micron/hr (under Clean, Dry, Empty (CDE) condition).

## Load Cooling System

- Two (2) Ipsen Model GQ9000-125 HP VFD external argon gas cooling systems (variable frequency drive) with gas injection manifold nozzle arrangement located on the outside of the hot zone. Backfill pressure for convection cooling is set at 633 Torr (-5~ Hg).

## Peripheral Equipment

- Dual loop cooling water manifolds for both furnace and gas cooling system, equipped with interlocked flow switches.
- VRT supporting structures of carbon steel construction
- A carbon steel constructed service platform at the top of the furnace for maintenance access to power feed-throughs and VRT supporting structures
- Inert gas actuated pneumatic system.
- One (1) graphite temperature survey fixture for first furnace pre-shipment testing.
- Forty-eight (48) type "N" load survey thermocouples for first furnace pre-shipment testing.

# Ipsen Model HR-40x48x240-1-Bar Horizontal Loading Vacuum Titanium Stress Relief Furnace



## Container Contents

- |                                  |   |                                  |
|----------------------------------|---|----------------------------------|
| #1 (2) 120 KVA Transformers      | #9 Spencer Gas Booster                      | #17 Misc. Parts and Accessories- |
| #2 (2) 240 KVA Transformers      | #10 Gas Blower Pipe (2)                     | Ladder, Stanchion's, Supports    |
| #3 Misc. Parts and Accessories   | #11 Misc. Parts and Accessories             | #18 Vacuum Pump Assembly's (2)   |
| #4 Painted Risers                | #12 Misc. Parts and Accessories             | #19 Control Cabinet              |
| #5 Misc. Electrical              | #13 Spencer Gas Booster                     | #20 (2) Valves                   |
| #6 (2) Hunterdon Transformers    | #14 Control Cabinet                         | #21 Misc. Parts                  |
| #7 (2) Electrical Control Panels | #15 Transformer / Misc. Parts & Accessories | #22 Outside – Load Transfer Cart |
| #8 Misc. Parts and Accessories   | #16 Misc. Piping / Gas / Air and Controls   | #23 Oven                         |

**All Parties Interested In Attending The Dedicated Preview and Inspection Date on Wednesday, December 22nd, Will Need To Contact David Barkoff @ +1 (650) 759 2242.**

## Terms & Conditions

• Buyers are responsible for all shipping and rigging charges. • All items are sold AS IS, WHERE IS AND WITH ALL FAULTS. • Heritage Global Partners shall charge and collect from each successful bidder a 15% on site cash buyers; 18% on site buyers using credit cards. Purchasers who pay in the form of certified funds or wire transfer shall receive a discount from the buyer's premium equal to 3% of the purchase price. • Each successful bidder must pay a 25% deposit toward the purchase price immediately following the successful bid. • Applicable taxes will be added to the purchase price of all taxable items. • Acceptable means of payment include certified funds, wire transfers, Visa, American Express' and Mastercard'. • The complete terms and conditions that govern this auction will be distributed at the auction site and/or are available on our website at [www.hgpauction.com](http://www.hgpauction.com). The complete terms and conditions may include terms unique to this particular auction. Please read them carefully before you bid in the auction. If you participate in the auction, you will be deemed to have read and consented to all of the Terms & Conditions.



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