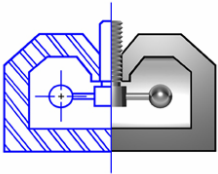


If I don't dream, who will do it for me?

John L. Biach
1905-1973

Expanding Horizons

Biach Industries, Inc. Quarterly Newsletter Vol. 7 No.2--December 2005



Nuclear Industry Orders

FP&L ordered five custom stud tensioners for 4.75" dia. Reactor Coolant Pump casing studs and two accessory pumping units with high pressure hose assemblies.

The *Hatch Plant* of *Southern Nuclear* replaced their "long life" (10yr.) tensioner seals and purchased two new puller bars for their 5.75" dia. studs. Biach also supplied special actuators for hydraulic piston return on their stud tensioners.

Southern Nuclear's Farley Plant ordered a complete hoist and tractor package for each vessel to lift and transport their Biach RPV stud tensioners around the head flange.

Duke Power's Oconee Plant purchased a new high pressure, hand carried pumping unit for use with Biach tensioners on its manway covers.

The *Palisades Plant* purchased Biach's SEMS III for taking elongation measurements on their RPV studs.



Other Industry News:

Portsmouth Naval Shipyard ordered a new hand carried, high pressure pumping unit for use with their special two stage tensioners used on their portal cranes

Arizona Public Service's Palo Verde Plant contracted with Biach's Information Arts (BIA) division for a complete work documentation project on capturing tribal knowledge regarding "Foreign Object Surveillance and Retrieval". This is another application of BIA's documentation skills and experience to meet specific site needs. Previously, the BIA division developed specialized supervisory Polar Crane and Load Cell packages for So. California Edison and has developed customized stud tensioner operator training packages for Exelon Midwest sites, San Onofre and Westinghouse Electric.

Biach to participate in The NASCC Steel Conference in San Antonio, February 8-10, 2006.

Come meet Rob Gregory to discuss bolt tensioning for stability and load assurance. Rob has been Biach's "bridge expert" having been closely involved with the design of many tensioners for cable clamps, anchor bolts, suspender rods, setting counterweights and pin hanger retrofits. Come meet Rob to discuss your bolting project!

Biach Introduces "Web Based Collaborative Services"

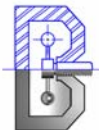
Just-in-time and Pre-outage briefing instant refresher training via web conferencing with Biach experts. Classroom administration of full operator training packages via web conferencing.



Biach Industries' Equipment Refurbishment Services

For many companies, reducing costs has meant reduced maintenance staffing. Experienced personnel have moved on. Maintenance departments are faced with "doing more with less people". Return your Biach equipment to the factory and let the experts at Biach Industries provide quick-turnaround, high quality service so your equipment is ready to perform for you when you really need it.

Call us at (908)276-3110, or send an email to rob@biach.com or joed@biach.com



BIACH INDUSTRIES, INC.
75 CHESTNUT STREET
CRANFORD, NJ 07016



FIELD SERVICE NEWS.....

Biach Tech Reps have been busy this Fall performing equipment service at:

*Hatch	*North Anna	*St. Lucie
*River Bend	*San Onofre	*Quad Cities
*Diablo Canyon	*Calvert Cliffs (at West. Waltz Mill)	

Providing Outage Support at:

*Byron	*Millstone 3	*Vogtle
*North Anna	*St. Lucie	*Dresden 2&3
*Diablo Canyon	*Susquehanna	*Comanche Peak

Complex Problems > Creative Solutions

A Historical Column by Joe Orban, VP Emeritus, Engineering

“Dupont presents challenge to Biach”

Design and manufacture a stud tensioner for a Chemical Converter having 11” diameter studs requiring a residual load of 2,500,000 lbs. Additionally, with the vessel being over 53 feet in length it could not be hydro-tested vertically due to overhead constraints. Therefore, the tensioner must be capable of operating horizontally for the shop hydro-test and vertically after vessel installation.

The tensioner built for this application has a pulling capacity of 4,000,000 lbs. at 8,800 psi. The required residual load is achieved with a pull of 3,600,000 lbs at 7,900 psi. This tensioner (a two stage design with both pistons operating in parallel) has a cylinder outside diameter of 24.5”, an overall height of 9 feet and weighs 5,500 lbs. Since the tensioner pull system weighed over 1,300 lbs, a custom designed pneumatic support cylinder was incorporated to support it (for vertical operation) creating a zero weight affect to prevent galling during threading and unthreading. For horizontal operation, the pull system was supported by six sets of spring loaded cam followers angled to match the stud thread pitch, facilitating threading and unthreading.

The second challenge presented to us was a Pressure Vessel with an internal operating pressure of 45,000 psi. with 11” diameter studs as well, required a much lighter residual load of 4,600,000 lbs.

This tensioner has a pulling capacity of 7,000,000 lbs. at 11,600 psi. The required residual load is achieved with a pull of 5,700,000 lbs at 9,450 psi. This tensioner (single stage design) has a cylinder outside diameter of 42”, and overall height of 5’-6’ and weighs 8,200 lbs. The tensioner operates vertically only and incorporates a pneumatic pull system support similar to the one above. (See above photo)

The above applications represent the largest stud size Biach has addressed to date.