






# Case Histories: Manufacturing

Biach engineers respond to one of a kind problems encountered by customers in many diverse industries.

Shearing Press for Steel Plate	
<p><b>Customer:</b> Mosley Machine</p> <p><b>Problem:</b> Customer had two Problems: Clearance did not permit use of conventional tools and; severe shock and vibration from shearing operation would preclude use of conventional tools even if they did fit the application.</p> <p><b>Solution:</b> Biach developed a special compact tool that fit the limited space and provided the high stud loading requirement.</p>	
Plate Assembly - Hydraulic Presses And Rolling Mills	
<p><b>Problem:</b> Customers had difficulty assembling plates and running nuts into place. Frequently they faced lengthy times in nut running or disassembly of the equipment.</p> <p><b>Solution:</b> Biach designed a special "Split Nut" that could be quickly and easily inserted after the plates had been stacked. By splitting the nut in half and incorporating a hinge concept, the workers did not face excessive time in screwing the nut over long bolts or threaded rods.</p>	
Production Line - Film Fixture	
<p><b>Customer:</b> Eastman Kodak</p> <p><b>Problem:</b> Customer needed an accurate yet easy-to-use method for use in film production line. Repeatable loads were important.</p> <p><b>Solution:</b> Biach personnel worked closely with Kodak engineers to design a special tensioner for their project. The unit was made from Titanium and incorporated an internal spring return system, positive stop, special knurled puller bar for easy gripping, and a torque limiter on the drive gear. It was particularly important to make the system easy to operate. The puller bar was designed to "drop on" and engage the stud (1/2" - 20) with a quarter turn. Additionally, we provided a special electric pumping unit, for glycerin fluid operation, with remote controls. This unit incorporated special valving for accurate low pressure use.</p>	
Swing Gear Segments on D31 Drag Line	
<p><b>Customer:</b> Marion Power Shovel</p> <p><b>Problem:</b> Customer faced severe vibrations, and a need for high loads that torque could not assure.</p> <p><b>Solution:</b> Biach designed special high capacity tensioners and supplied complete systems for this application which the customer provided with his equipment.</p>	
Extruder Head Manufacture and Repair	
<p><b>Customer:</b> Midwest Industries</p> <p><b>Problem:</b> Customer needed means of controlled tightening. The present method involved large wrench and long pipes.</p> <p><b>Solution:</b> Biach provided custom tensioners for this application. Customer now recommends Biach units with their equipment.</p>	

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## Case Histories: Manufacturing, Continued

### Harrow Disc Assembly

**Customer:** John Deere

**Problem:** Harrow disc assemblies which had been torqued on customer's automatic assembly line came loose and fell apart while being transported by rail a few hundred yards to another building. Knowing what would happen when these assemblies were used in the field, prompted their engineers to search for a dependable bolt-up method.



**Solution:** Biach provided tools for their assembly line which applied a hydraulically actuated axial load followed by a pneumatically powered nut seating device. Speed of operation, ease in handling and output capacity were important concerns.

### Large Fan Bolting

**Customer:** Buffalo Forge

**Problem:** Conventional tools could not provide required loads on short joint lengths which would be required to prevent extreme vibrations encountered on large fans.

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**Solution:** Biach designed tensioners to develop the required loads.