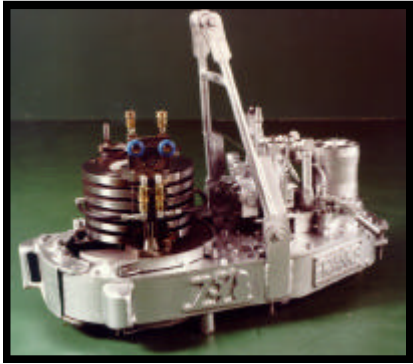


## FLUID GRIP™

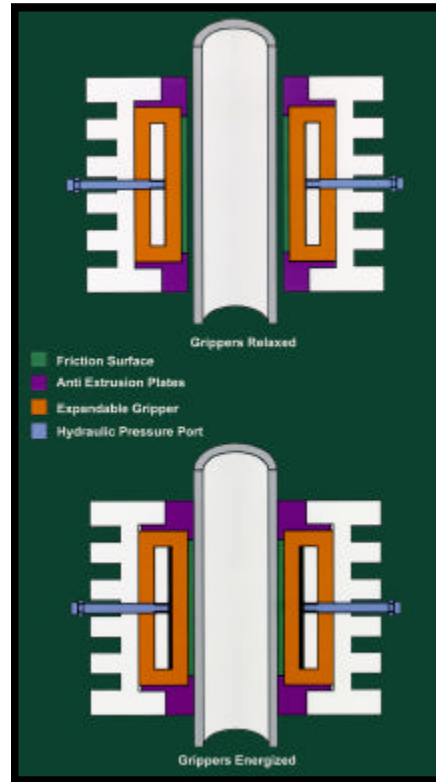
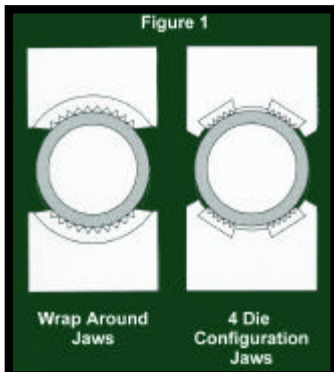


### THE PROBLEM

For years running expensive corrosion resistant alloy tubulars without causing damaging die marks has been a problem. Traditional power tong gripping systems rely on metal toothed inserts which penetrate the pipe surface to obtain sufficient gripping force needed to generate torques required during make-up (Figure 1). These damaging indentions reduce wall thickness and create stress concentrations in localized areas which accelerate corrosion. Pipe body failures frequently occur in these areas.

### FINALLY! A SOLUTION...

The search for a solution to this problem has been underway at Frank's since the late 1960's when Frank's was granted its first U.S. patent for a dieless tong. The research and development continued and has led to the introduction of the new **FLUID GRIP Power Tong**.



### HOW THE FLUID GRIP™ WORKS

The **FLUID GRIP** concept has completely revolutionized the approach to gripping tubulars by encircling it with fluid pressure (Figure 2). The gripping surface is completely non-metallic and does not alter the pipe surface in any way. When pressure is applied to the circumference of the tube body, it is done in a uniform manner regardless of the pipe's degree of roundness or surface finish. Unlike other friction grip devices which have rigid jaw mechanisms the **FLUID GRIP** conforms to the pipe. The **FLUID GRIP** features an integral back up tong which utilizes the same gripping device as the power tong. The entire system is hydraulically controlled by the tong operator. Built in safe-guards prevent pressurization of the system while the tong is in the open position.