

**Original T-A®**

**Case Study:** 1003  
**Industry:** Oil & Gas/Petrochemical  
**Part:** Mud Injunction Tube  
**Material:** Heat Treated Alloy Steel  
**Diameter:** 0.750"  
**Depth:** 10.00"  
**Insert:** 151A-0024  
**Holder:** 27010S-100L



**The Challenge**

A contract machine shop repairs and maintains equipment for the oilfield industry. They are machining a down hole mud injection tube used in offshore drilling. The tube is made from heat treated alloy steel. They are using a manual lathe running with water soluble oil coolant through the tool with a rotary coolant adapter.

Seeking to improve the production process, the customer needed to reduce the cycle time and decrease the cost of production

**The Advantages**

The Original T-A lowered cycle time and increased tool life.

- Decreased cycle time by 45.7%
- Lowered the cost of production by 59.15%
- Decreased cost per hole from \$14.14 to \$5.78
- Total savings = \$836.58 or 59.15%

**Previous Tooling**

**Nachi Cobalt Twist Drill**

- 475 RPM
- 0.005 IPR
- Cycle time = 4.7 minutes
- Tool life = 8 holes

**Allied Machine Solution**

**Original T-A®**

- 750 RPM
- 0.0065 IPR
- Cycle time = 2.55 minutes
- Tool life = 11 holes

