Down Hole Mud Injection Tube: Original T-A®

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.

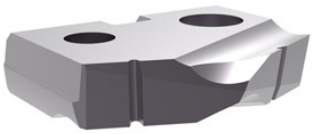
The **Original T-A** lowered cycle time and increased tool life.

Product: Original T-A®
Objective: Decrease cycle time
Industry: Oil & gas/petrochemical
Part: Mud injector tube
Material: Heat treated alloy steel
Hole Ø: 0.75" *(19.050 mm)*
Hole Depth: 10.0" *(254 mm)*

Measure	Competitor Drill	Original T-A®
RPM	475	750
Feed Rate	0.005 IPR *(0.127 mm/rev)*	0.0065 IPR *(0.165 mm/rev)*
Cycle Time	4 min 42 sec	2 min 33 sec
Tool Life	8 holes	11 holes
The T-A offered *59.12%* cost per hole savings over the competitor tooling.		

45% cycle time decrease

▸ Original T-A
Holder: ***27010S-100L***
Insert: ***151A-0024***



The Original T-A provided:

- ✓ Decreased cycle time
- ✓ Lowered the cost of production
- ✓ Increased tool life