Turbine Housing Sensor: EcoCut

The customer is machining a turbine housing sensor made from 347L stainless steel. They use a Kiwi HMC with a water soluble coolant-through.

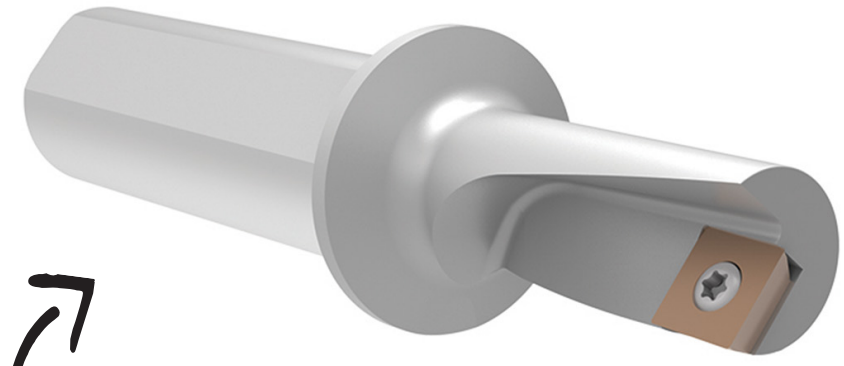
The customer was unahppy with this process and needed to reduce cycle time and decrease tooling costs.

The **EcoCut** tooling dramatically reduced the cycle time and also eliminated three tools in the production process.

Product: EcoCut
Objective: Decrease cycle time
Industry: Renewable energy/energy
Part: Turbine housing sensor
Material: 347L Stainless steel
Hole Depth: 1.25" *(31.75 mm)*

Measure	Previous Tooling	EcoCut
RPM	**Spot drill (0.860"** *(21.844 mm)* **Ø)** • Cycle time: 1 min 30 sec • Tool life: 100 parts **Cobalt drill (0.375"** *(9.525 mm)* **Ø)** • Cycle time: 1 min 26 sec • Tool life: 50 parts **Cobalt drill (0.4687"** *(11.905 mm)* **Ø)** • Cycle time: 1 min 36 sec • Tool life: 50 parts **Line Bore (0.5"** *(12.700 mm)* **Ø)** • Cycle time: 7 min 18 sec • Tool life: 70 parts	2832
Speed		350 SFM *(106.680 M/min)*
Feed Rate		0.004 IPR *(0.102 mm/rev)*
Penetration Rate		11.33 IPM *(287.782 mm/min)*
Cycle Time	11 min 50 sec	51.6 sec

▸ EcoCut
Insert: XCNT 060202 EN CM40 Grade
Holder: EC12R-3.0D 06 H-E



92% cycle time decrease

The EcoCut provided:

- ✓ Reduced tools needed
- ✓ Decreased cycle time