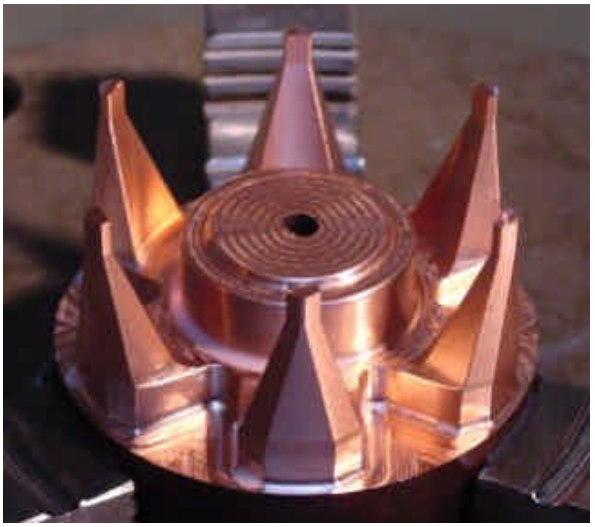
MILLSTAR®

Cutting Edge Solutions

Copper electrode machining with Millstar Tools

Objective

The demo was conducted to demonstrate the high-speed, high volume machining capabilities of Millstar insert type and Solid carbide cutting tools.



Electrode after completion of machining

Machining Summary

A complex shaped Electrode was machined using 3D NC program to demonstrate the high-speed, high volume machining capabilities of Millstar cutting tools.

The size of the electrode block was Dia 90mm X 45mm. The previous machining method was to machine using multiple tools which included a slender tool of Dia 4mm to a length of 35mm. Total Machining time was 4 Hours.

HSM*cil* / Millstar machined this work piece with two tools of Diameter 12 Bullnose with corner radius of 1mm (insert type) and Diameter 6 Toroid with Corner radius of 1.5mm. Total machining time was 1 Hour 45 minutes. Maximum feed rate was 6meters/min.

Millstar Process

Tool	Process	Machining time
BD 12 R 1.0 TLN (Dia 12mm Bullnose)	Roughing	35 mins
TOM 6.0 EX (Dia 6mm Toroid)	Semi finishing	20 mins
TOM 6.0 EX (Dia 6mm Toroid)	Finishing	50 mins
Total Machining time		**105 mins**

Reduction in Machining time:

55%

Productivity gain:

110% +

Previous Process

Tool	Process	Machining time
8mm Ballnose (Solid Carbide)	Roughing	80 mins
6mm Ballnose (Solid Carbide)	Semi finishing	60 mins
6mm Ballnose (Solid Carbide)	Finishing 1	80 mins
4mm Ballnose (Solid Carbide)	Finishing 2	20 mins
Total Machining time		***240 mins***