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5ME® demonstrates cryogenic machining technology, shop floor software with high-profile partners at IMTS

Production management software suite and cryogenic machining demonstrations on machines from Mazak, Okuma, Star SU, Sunnen and others highlight 5ME's capability to maximize productivity and profitability.

AUGUST 2016 – 5ME will showcase its cryogenic technology and production management software with high-profile partners at IMTS this year, joining forces with Mazak, Okuma, FFG MAG, Star SU, Fullerton Tool, Hydromat, Sunnen, Bosch Rexroth and NUM to demonstrate the cost-saving and better-production benefits of cutting with cryo and digital management of the shop floor.

5ME's unique, multi-patented cryogenic machining process is a breakthrough technology that enables higher cutting speeds for increased material removal and longer tool life by transmitting liquid nitrogen at -321°F through the spindle/turret and tool body, directly to the cutting edge. This environmentally friendly machining technology increases throughput, part quality, tool life, and profitability while reducing energy consumption. It also provides a healthier, safer work environment through the elimination of traditional water-based or oil-based coolants.

The revolutionary VARIAXIS i-800T with cryogenic machining technology will be unveiled at Mazak's booth, S-8300. The machine, a 5-Axis VMC with a trunnion table and turning capability, manufactures high-value titanium aero engine components. 5ME and Mazak aim to launch cryogenic machining technology across numerous Mazak platforms and create a unique, "designed for Cryo" machine tool by 2019, to coincide with Mazak's 100-year anniversary.

At booth S-8500, 5ME and Okuma will offer 5ME's cryo technology across numerous Okuma platforms, showcasing it on the MU-8000VL 5-Axis VMC with trunnion table and turning capability. The machine is particularly suited for processing tough materials commonly used in aerospace part production, such as blisks and aero engine components. 5ME and Okuma look to tackle difficult-to-machine alloys for the aerospace industry as they collaboratively expand the application of this technology.

In 2017, FFG and its US distributor, Star SU (N-2964), will offer 5ME cryogenics on the Boehringer VDF lathe platform. BlueZone™ cryogenic tool technology licensed by 5ME® will be displayed at the Star SU / Star Cutter booth (N-2964, W-2258) as well as the Fullerton booth (W-1693).

Also at IMTS 2016, Hydromat (S-8348) and Sunnen (N-7400) will demonstrate 5ME's new Freedom 4.0 Smart Manufacturing IoT Platform, running on their equipment with the new Freedom Gateway™ hardware appliance with Edge Analytics software. Okuma, Mazak, FFG MAG (S-8129), Bosch Rexroth (E-4854), and NUM (E-4837) will all show Freedom 4.0 with the new SmartBoard (Smart Dashboards) feature from 5ME. Highly configurable, SmartBoard allows users to create their own dashboards with the data they select, as well as the ability to embed images, websites, work instructions, and spec sheets.

The Freedom software suite leverages the MTConnect standard and automatically extracts critical manufacturing data to produce web-based reports and analytics on asset utilization, availability, performance, quality and OEE. It is brand, asset and process agnostic. The software integrates seamlessly with ERP, MES, maintenance and quality business systems, and can be accessed anytime via smartphone or tablet device.

For more information on cryogenic machining or 5ME's production management software, go to <http://5me.com/>.

- END -

CONTACT:

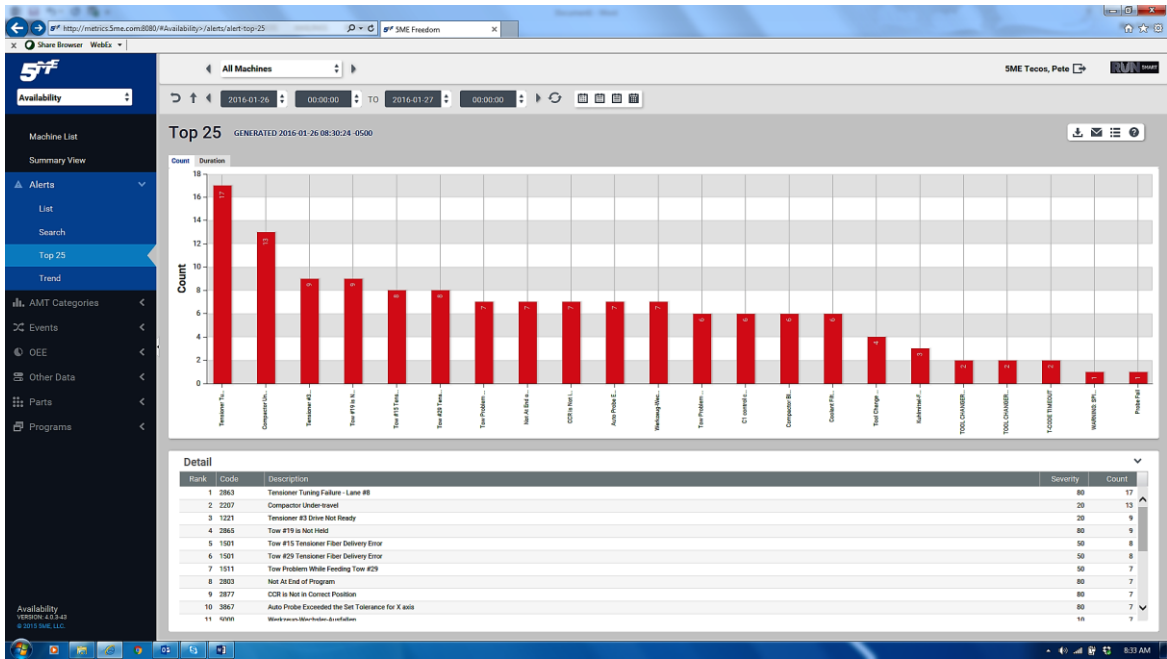
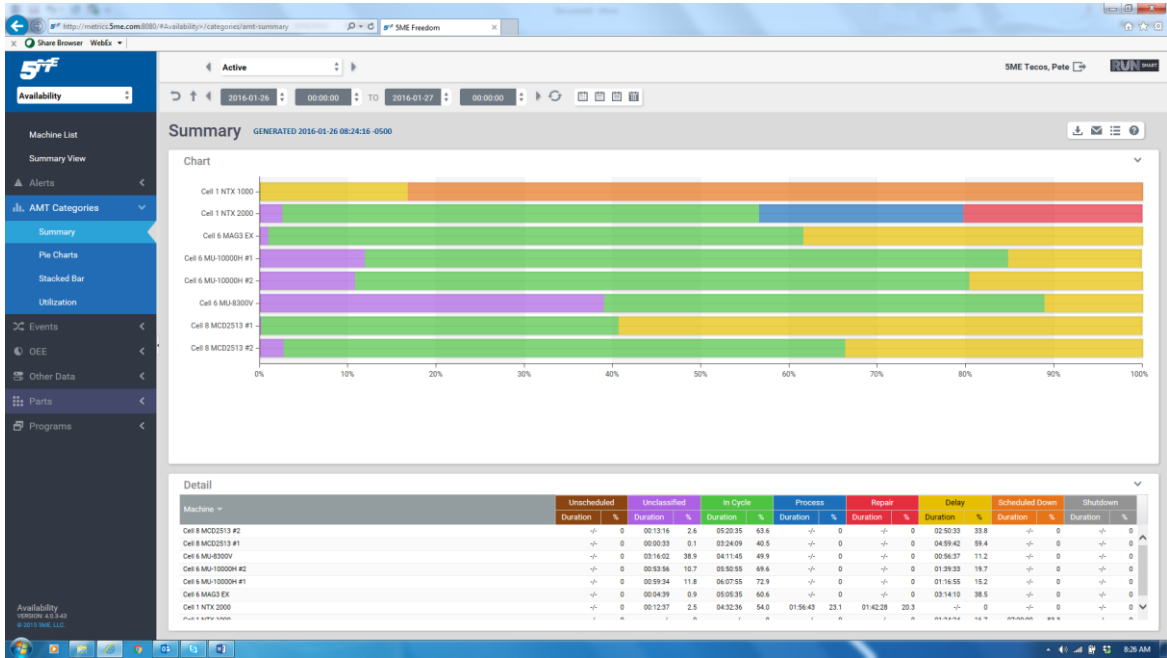
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MB-4000H



Click to View Detailed Data!

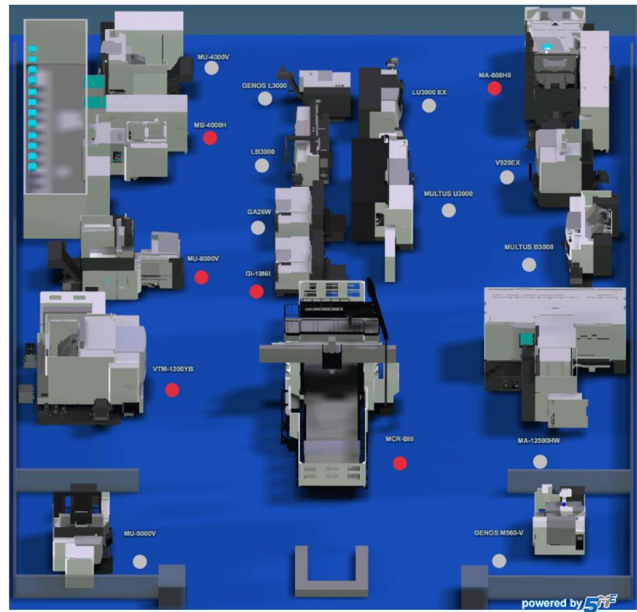
Max Machining Volume	23.8" dia x 35.43" high
X,Z Travel	22.00" x 22.54" x 24.81"
Table Size (Pallet size)	15.75" x 15.75"
Max Weight on Table (Pallet)	882 lbs.
Spindle Nose to Pallet	3.35 - 27.95"
A/C	2 (opt 8, 10, 12 or PM3)
Spindle Speed (IPM)	15,000
Spindle Conversion	CoMo Big Plus
Max Horsepower	30
Max Torque Ft. Lbs.	120
Capacity	110-Maxim
Max Tool Length	15.75"
Tool Change Time T-T-C	1.3/3.3
Quick Stopper (MS)	2362
Weight (N/P)	Prep for 1000PS
Height	154"
Front Space	55.3" x 180"
Weight	20,943 lbs.

Visit the machine to see this part being produced today!



Machine Utilization (Last 24 Hrs)

Cycle Utilization	60.84%
Equipment Utilization	60.84%
Potential Utilization	100.00%



5th Haas 1 Mazak User

Dashboard

2016-08-03 00:00:00 TO 2016-08-04 00:00:00

Mazak Cryo

Overview Cryogenics Performance Alarms Events Parts Programs

VARIAXIS i-800T + Integrated Cryogenics

Cryo System Status

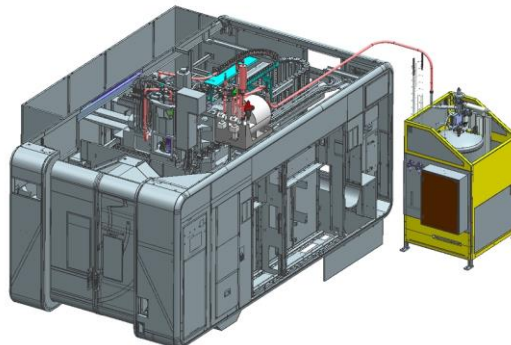
Cryo System Mode (A/M)	MANUAL
CNC Commanded Flow (%)	40
Cryo Spindle Valve Open (%)	0
CNC Cryo Ready (A/I)	ACTIVE
Cryo Machine Motion Ready (A/I)	ACTIVE
Cryo System Ready (A/I)	INACTIVE
CNC Requesting Flow (A/I)	ACTIVE

Sub-Cooler

Sub-Cooler Fill Valve Open (%)	0
Sub-Cooler Fill Level (%)	43
Sub-Cooler Fill In-Process (A/I)	INACTIVE

Rotary Union and Purge

Rotary Union Temperature (F)	52
Purge Valve Temperature (F)	51
Purge Vent Solenoid (A/I)	INACTIVE



Dewar

Dewar Pressure (PSI)	75
Dewar Fill Level (%)	32
Dewar Fill Solenoid (A/I)	INACTIVE
Dewar Pressure Building Solenoid (A/I)	INACTIVE
Dewar Extraction Solenoid (A/I)	INACTIVE
Dewar Vent Solenoid (A/I)	INACTIVE
GN2 Solenoid (A/I)	INACTIVE