

COMPACT SWAGING MACHINE

MAKES FLEET DEBUT



"Delivery of the CSM is a tremendous triumph and exemplifies the importance of fleet feedback and the acquisition community working to equip our warfighters with more efficient and safer tools. This is a game-changer and a definite win for Sailors."

Captain Ken "Stubby" Sterbenz, PMA 251 Program Manager



DECADES-OLD NAVY PROCESS GETS AUTOMATED

The fleet's oldest aircraft carrier, USS Nimitz (CVN 68), became the first to deploy in June with the highly anticipated Compact Swaging Machine (CSM), which eliminates the time and manpower-intensive socket pouring process for producing purchase cable terminals. On the carrier's flight deck, these critical components connect to arresting gear wires, which transmit the intense force of landing aircraft to below-deck arresting gear engines, bringing it to a controlled stop in less than 400 feet.

The CSM was developed by the Aircraft Launch and Recovery Equipment Program Office (PMA 251) and New Hampshire-based industry partner Creare, Inc., in direct response to a high-priority fleet need. Now that the system has successfully completed comprehensive testing, each of the Navy's carriers is scheduled to receive two CSMs, bringing benefits to their respective Air Departments' V-2 Division Sailors responsible for safe shipboard aircraft arrestments.

"Our whole team has worked incredibly hard to get this game-changing system out to the fleet and we're very proud of it and the benefits it delivers to the Sailors and the fleet," said CSM Program Manager Paula Parsons, who has supported the system from initial concept to fleet delivery.

TRADITIONAL SOCKET POURING



Sailors work with toxic molten zinc aboard a moving ship in a dangerous, labor intensive and time-consuming process

Process used since the Navy started using arresting gear aboard carriers, circa 1930s

Production of one terminal takes four to six Sailors about eight hours

Current work space requires protective gear and handling of noxious materials at temps up to 1,000 degrees

Zinc-poured socket terminal

CSM-swaged terminal

COMPACT SWAGING MACHINE

Designed in response to fleet demand, using Small Business Innovation Research funding

Automates process through mechanized pressing force of up to 800 tons of pressure

The roughly three-ton system is compact enough to fit in current shipboard socket pouring spaces

Production of one terminal takes three Sailors just one hour

Simplifies maintenance and troubleshooting, while lowering risk to personnel

Formal CSM training will be incorporated into the curriculum at the Center for Naval Aviation Technical Training Lakehurst in 2020



NIMITZ SAILORS SING CSM'S PRAISES

"It has been a great experience to see the machine live and operational and has proven to be a great replacement for the old way of doing things. New Sailors will have no idea what this machine has done in terms of man hours and safety."
Aviation Boatswain's Mate (Equipment) (ABE) Chief Harry Meyer

"Easy to use. Not as hot in spaces. Not dealing with hazardous fumes. It's amazing!"
ABE 3rd Class Petty Officer Christian Smania

"It seems dummy proof and really simple to operate!"
ABE 2nd Class Petty Officer Andria King

"This is a big change and a move forward in technology. This will allow for down wires to be back up and running faster, which will positively impact air ops."
ABE 1st Class Petty Officer Juan Perez

"The CSM gives us the availability to redirect manpower to accomplish longer missions."
ABE 1st Petty Officer Class Brian Nolder

