

NAVY Transition Assistance Program

N06-016 - Kennon Products, Inc.

Clamp to Replace Bonded Click-stud

NEED & CUSTOMER REQUIREMENT

Need: Bonded click-stud attachments for cabin insulation and wiring are tedious and labor intensive to install. Once bonded, they cannot be easily repositioned. When removed, either intentionally or accidentally, the surface they were attached to must be repaired. Installation and repair are costly.

Value to the Warfighter: A positionable clamp will significantly reduce installation and repair costs. Hundreds of click-studs are used per aircraft. Up to 110 minutes per click-stud attachment could be saved. New clamp is tough, easy to use, and versatile, for insulating blankets and wiring.

Operational Gap: Bonded click-studs are time consuming and costly to install. Bonded studs can damage composite airframes. A safe, positionable clamp will speed installation and reduce costs. New clamp can directly replace stud (and grommet) assemblies, and can replace standoffs

Customer Specifications: To reduce costs associated with the installation, removal and damage repair associated with bonded click-studs. Clamp is a direct replacement for bonded or threaded studs.

Technology Description: A tough, versatile c-clamp design holds tight and positions easily using snap ring pliers. It is a fiber and resin composite (FRP), unaffected by temperature changes, and neither susceptible to, nor causing corrosion with airframes. It is as light as a click-stud and grommet.

SPONSORSHIP of original SBIR/STTR Topic

SYSCOM: NAVAIR

Transition Target: V-22

Original Sponsoring Program:
NAVAIR PMA-275

TPOC Phone Number:
301 342 9398

Note:
Initial Topic N06-016 for attachment clamps was expanded to include insulation and anti-ballistics capabilities through the results of Phase I efforts, and communications with PMA-275.



patent pending

TECHNOLOGY DEVELOPMENT MILESTONES (SBIR/STTR)

Milestone	TRL	Risk	Measure of Success	TRL Date
fabricate final prototype	4	Low	expanded capabilities, user acceptance	11/2006
final prototype testing	5	Low	passes 50 lbf pull-off test and vibration testing	08/2007
qualification testing	6	Moderate	passes extended vibration testing	09/2009
limited production run	8	High	meets QA standards	06/2010
operational testing	9	High	meets customer's expectations	09/2010

Open contract: N68335-08-C-0021 ending 09/16/09

TECHNOLOGY TRANSITION OPPORTUNITIES (PHASE III)

Other Potential Applications:

Military and commercial aircraft that currently uses click-studs to attach insulation, wiring and other objects to the airframe.

Business Model:

Kennon is a manufacturer of aircraft support equipment. The clamp will be manufactured either by Kennon other qualified fabricator.

Objective:

The company wishes to supply or license the product to prime integrators.