

**Technology Title:** *Altite* “No Chrome” Metal Finishing Process

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**ABSTRACT**

**Keywords:** chromate free; corrosion protection; manufacturing

Naval Undersea Warfare Center Division Newport has developed a new metal finishing process which does not use chromates for conversion coatings. The new process uses titanates to replace the toxic hexavalent chromate ion in the conversion bath. The process received patent number US 6,638,369 on October 28, 2003. The trade name *Altite* has a NAVSEA Material Safety Data Sheet (MSDS) and NUWC MSDS # 13501. During development, laboratory 1” X 6” specimens were coated with *Altite* and also with the standard chromate conversion coating. Several alloys of aluminum were tested in ASTM salt spray. *Altite* was found to be comparable in corrosion protection to the chromate conversion coating. The next step was to scale up the process to standard 3” X 10” test panels. Equipment was purchased to accomplish the task of coating and testing the larger panels and a laboratory was set up to produce standard test panels for testing at NUWC and subsequently for sending panels out for independent testing. The Division is looking for an industry partner to continue the scale up, testing and commercialization of *Altite*.

U.S. Pat. Nos. 8,082,802; 7,204,160; 7,150,200; 7,051,600; 6,918,306; 6,860,156 and 6,638,369

**THUMBNAIL**

*Altite* chromate free conversion coating available for commercial development

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