

ADMIRALTY MARINE TECHNOLOGY ESTABLISHMENT

Ministry of Defence Procurement Executive

Dockyard Laboratory

HM Naval Base Portsmouth Hants PO1 3LZ

Outstations HM Naval Bases Chatham Devonport Rosyth

Telephone Portsmouth 22351 ext 22181

Boathouse  
C191  
HM Naval Base  
PORTSMOUTH

*Please reply to Superintending Scientist*  
Your Reference

Our Reference  
MB/M5/77

5 December 1977

HMS VICTORY – NAIL REMOVED FROM POOP DECK

In accordance with your request CDL Form A dated 17<sup>th</sup> November 1977 chemical analysis has been carried out of a nail removed from the Poop Deck of HMS Victory with the following results:

Tin %	8.92
Zinc %	1.49
Lead %	0.21
Nickel % less than	0.05
Bismuth %	0.07
Arsenic %	0.10
Total other impurities % less than	0.10
Copper %	Remainder

These results show that the material is of the type known as Admiralty Gunmetal and not Muntz metal as possibly indicated.

A microsection revealed that the item was a casting.

*M J Barnett.*  
M J Barnett.  
For Superintending Scientist.

Date about 1790's

Gunmetal at the time was made with the melted down bronze cannons that were being replaced by Iron owing to the tendency for the Bronze Cannons to burst when fired.