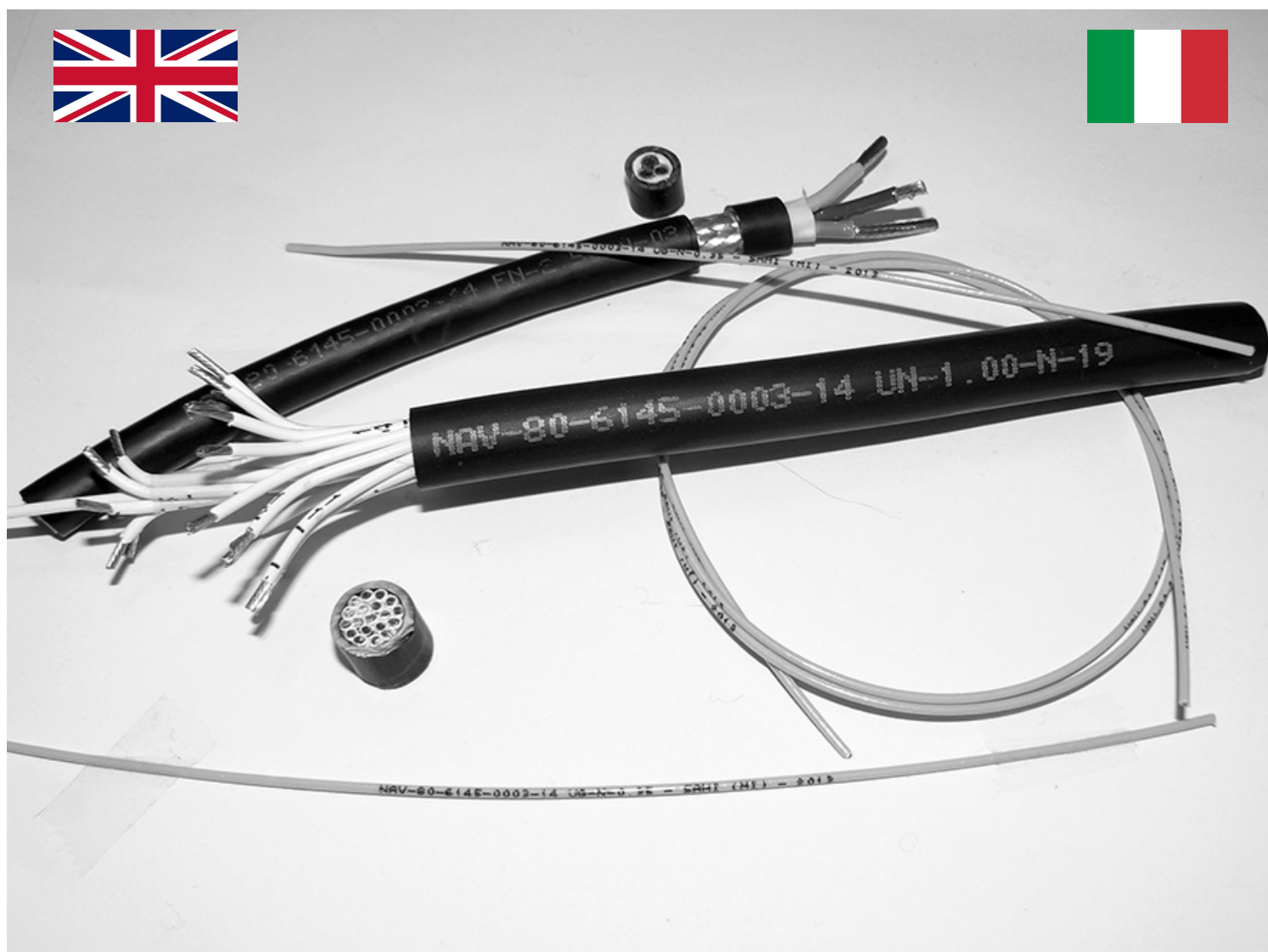


CABLE SPECIFICATIONS READ-ACROSS EXERCISE

UK DEF STAN 61-12 Part 25 - Issue 6

Vs

ITALY'S NAV-80-6145-SERIES



UK DEF-STAN 61-12 (Part25) Vs ITALY's NAV-80-6145-SERIES

Cable specifications read-across exercise

Foreword

- 1) This technical report (read-across exercise) compares point by point the requirements and test methods of the specification of the Italian Navy NAV-80-6145-SERIES with that of the U.K. DEF STAN 61-12 (Part 25), relating to electrical cables suitable for installation on board military naval units.

The purpose of the comparison is to demonstrate that the materials defined by the two specifications are equivalent in terms of construction and dimensions, for their physico-chemical characteristics, and for the low fire hazard: they are therefore functionally equivalent to each other.

SAMI's final goal is to obtain the approval for the use of materials approved by the Italian Navy according to NAV-80-6145-SERIES to build and supply cables made according to DEF STAN 61-12 (Part25). In fact, SAMI has the technologies to produce all the configurations stated by the aforementioned Defence Standard.

- 2) Contents:

Chapter 1:	NAV-80-6145-SERIES History	page 2
	<i>It summarizes the origin of the current edition of the Italian specification for electrical and electronic interconnection cables suitable for use on board military naval units, highlighting how it derives from the 1990 DEF STAN 61-12 (Part 25), thanks to the partnership between SAMI and RAYCHEM-Tyco Electronics (now known as T T Electronics).</i>	
Chapter 2:	NAV-80-6145 & DEF STAN 61-12 Part 25 performance comparison	page 5
	<i>The two specifications are presented in parallel to allow immediate comparison topic-by-topic.</i>	
Chapter 3:	NAV-80-6145 Optimized overall shields	page 17
	<i>This chapter describes with examples the characteristics of the high efficiency screens (with controlled surface transfer impedance Z_t) normally produced by SAMI, prescribed by NAV-80-6145-0003-14-01B000 and not prescribed in DEF STAN 61-12 (Part 25)</i>	
Chapter 4:	Toxicity Index comparison	page 21
	<i>This chapter compares the values required by the two specifications for the Toxicity Index T.I.; these values refer to different quantities of material, applying however the same method for detecting dangerous elements.</i>	
Chapter 5:	Evaluation of the other limited fire hazard requirements	page 27
	<i>This chapter outlines the equivalences in the two specifications for the requirements to define cables as "Limited Fire Hazard".</i>	
Chapter 6:	Thermal Endurance limits comparison	page 32
	<i>This chapter demonstrates the equivalence of the thermal class for the cables of the two specifications under consideration by comparing the trend of the individual Arrhenius curves.</i>	
Chapter 7:	Oils and Fluids Resistance comparison	page 36
	<i>This chapter compares the different procedures, referred to the same standard (ISO 1817), which guarantee the maintenance over time of the physical characteristics of the sheath material in the presence of oils and fluids.</i>	
Chapter 8:	Assessment of construction differences	page 39
	<i>In conclusion we examined the constructive differences provided in the two specifications, proving that the cables according NAV-80-6145-SERIES can easily meet the requirements of DEF STAN 61-12 (Part 25) and vice versa.</i>	