

Preface

The demand for electrical power has increased on many ships, especially those with diesel-electric propulsion, where the supplied current becomes far too high and it is not efficient or practical to use the common supply of 440 V onboard a ship. Higher voltage is thus needed to reduce the current.

Modern ships, particularly container ships, LNG vessels, passenger ships and special offshore ships are now built with high voltage generating plants; however, the engineer officers onboard, may have only been trained on low voltage systems – although the new trend is to undergo High Voltage training. Also, not every ship has an Electro Technical Officer and the engineers must often take on the additional responsibility of operating and maintaining these systems.

With close to 40 years of first-hand experience by each of us in this mammoth industry, we have seen systems evolve from designs of the post 2nd World War era to those with the most sophisticated components and networks available today. It has indeed been a wonderful journey through time! These experiences have been our guiding light; they have prompted us to share our acquired knowledge with our counterparts and students in the International Maritime industry.

Relevant extracts from Regulations and other similar guidelines, have been included with permission; however, these must be used only for academic purposes. Relevant documents onboard ships must be referred to, for complying with Classification Societies' and other Statutory Requirements.

Acknowledgement

We are indebted to numerous learned and distinguished people and to leading world-class organisations for their invaluable support, updated information from their websites and related literature. Their contributions have undoubtedly enriched the content of this edition.

Several publications have also been the main source of our knowledge over the years, apart from our own experiences at sea, ashore in India and abroad and while teaching this subject.

We would like to specially thank our fellow seafarers and associated organisations for their continuous support in all our endeavours and for giving us the opportunity to share our acquired knowledge through the years.

And last but in no way the least, we thank our dear families for the patience and support while we spent precious time beyond our hectic work schedules each day, to realise a dream of being the first to publish a book on this subject, for the benefit of our seafaring fraternity.