PREFACE

Hardfacing is the process of depositing a layer or layers of metal of specific properties on certain areas of metal parts that are exposed to wear by one of various welding techniques. Hardfacing offers more than other wear prevention treatments. It is part of a well established practice and in the majority of cases, existing equipment can be used. Hardfacing provides protection in depth by depositing a layer or layers of metal. Hence it can be applied in a required thickness to give required protection. A wide variety of deposit types are available which are designed to withstand different forms of wear and service conditions. Hardfacing is applied only to specific areas of metal parts that are exposed to wear. Hence it can be applied selectively and in different thicknesses to suit the exact requirements of a work piece. This is a most economical way of fighting wear.

According to the American Welding Society, ‘hard surfacing” or hardfacing is defined as: The deposition of filler metal on a metal surface to obtain the desired properties and/or dimensions’, the desired properties being those that will resist abrasion, heat and corrosion.

Hardfacing is a particular form of surfacing that excludes the application of materials primarily for corrosion prevention or resistance to high temperature scaling or the application of low hardness, friction over-lays to prevent galling - eg. bronze surfacing. It also excludes the hardening of surfaces solely by heat treatments such as flame hardening, or nitriding.