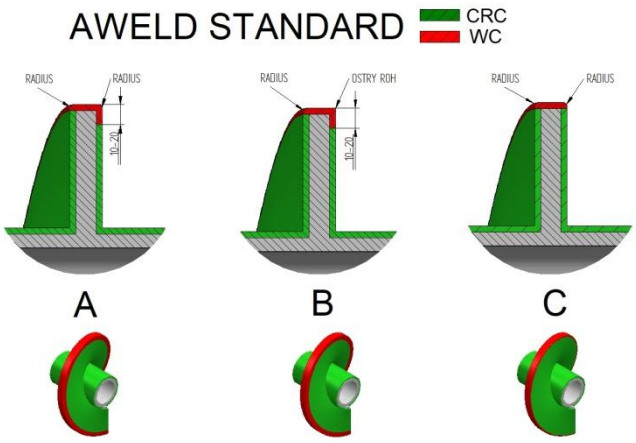
Wear protection systems

Since its establishment, AWELD has been occupying itself intensively with wear protection of all machine parts coming into contact with abrasive materials. The issue of wear and service life is permanently relevant particularly in the branch and ranks among leading European companies in the industry.
To achieve the maximal effect of service life-performance-price ratio, different methods must be chosen for wear protection of parts . AWELD uses most frequently the methods described in the following pages for the ceramic and brick industry.

1. Wear-resistant hardfacing

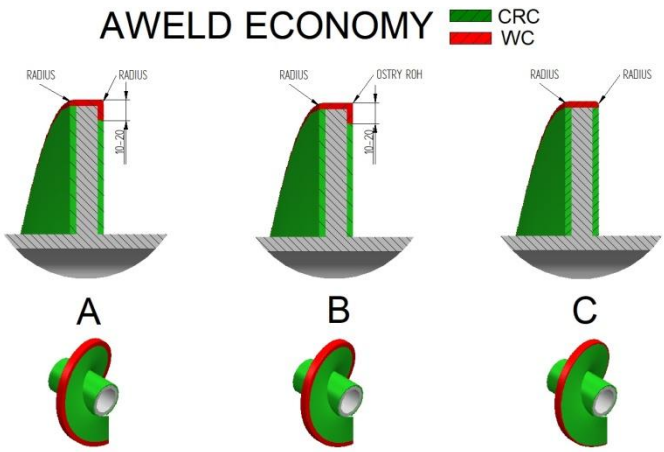
Carbide-based wear-resistant hardfacing constitutes the most frequently used method of wear protection for parts like augers of extruders, extruder chamber linings, paddles and augers of mixers, scrapers, hammers, feed rollers and other machine parts exposed to extreme abrasion. The hardfacing on areas where surface smoothness must be preserved – e. g. surfaces of auger blades, mixer cones, surfaces of mixer paddles, extruder chamber linings – is made of a material with high contents of chromium carbide. Hardfacing materials STELIT type are also used in machines for production of technical ceramics. Hardfacing material with high contents of tungsten carbide with defined size and defined grain shape is used on surfaces and edges where preservation of size is important and on surfaces exposed to extreme abrasion – e.g. on auger outer perimeters, scrapers, paddle perimeters, cutting rosettes. The thickness of the hardfacing layer depends on the conditions of use of the individual wear parts.

Aweld Standard:



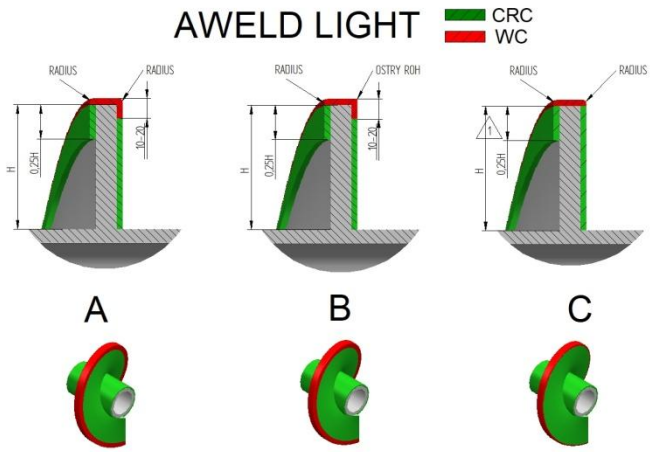
The auger is hardfaced on its perimeter with a material containing tungsten carbides; the thrust and rear surfaces of the auger blades and the auger hub are hardfaced with a material containing chromium carbides, covering the whole surface. The thicknesses of the hardfacing material are 3-4mm.

Aweld Economy:



The augers is hardfaced on its perimeter with a material containing tungsten carbides; the thrust and rear surfaces of the auger blades are fully hardfaced with a material containing chromium carbides. The auger hub is not hardfaced. The thicknesses of the hardfacing material are 3-4mm.

Aweld Light :



The auger is hardfaced on its perimeter with a material containing tungsten carbides; the thrust surfaces of the auger blades and partially the rear surfaces of the auger blades and partially the rear surfaces of the auger blades – about 20% of the surface away from perimeter – are hardfaced with a material containing chromium carbides. The auger hub and a part of the rear surface of the auger blades are not hardfaced. The thickness of the hardfacing material are 3-4mm.