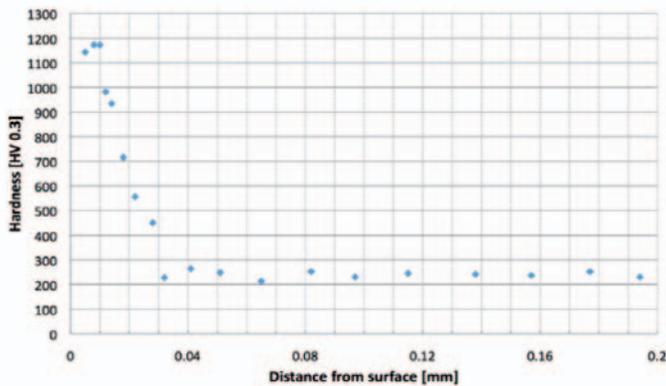


Expanite surface hardening process

Ideal for stainless steel pumps

Stainless steel is the material of choice where corrosion and/or migration properties are of importance - thus well suited for the food and beverage processing industry. In many cases, however, the relatively soft surface of stainless steels is prone to exces-

Expanite's surface hardening for stainless steel is a game changer in the industry. Not only can parts be treated with extremely short lead times – in principle day-to-day, previously unseen within surface hardening of stainless steel – the outcome also sets new standards for wear and corrosion resistance.



- no risk of delamination and spalling (Expanite is not a coating)
- lead time down to 3 working days
- reliable and repeat-

extruder screw and injection parts for the automotive sector, as well as screws, bolts and washers used in many industries.

There are three different basic processes, each of which can be optimized according to customers' requirements in terms of abrasion, wear, corrosion and scratch resistance.

Micrographs and hardness profile of part in AISI316

sive wear and/or galling. This is a major concern, especially in pumps where abrasive and corrosive media are handled.

Expanite has in recent months achieved a major breakthrough within the pump industry with German, North American and Japanese customers, by hardening both screw and positive displacement pump parts for the food and beverage industry.

With Expanite, it is possible to increase the surface hardness of stainless steels by a factor of 10, while maintaining or even improving corrosion resistance. This method is considered unique since it is suitable for austenitic, ferritic, martensitic and duplex stainless steels. The Expanite process also significantly improves resistance against issues such as galling, cavitation erosion and abrasive wear.

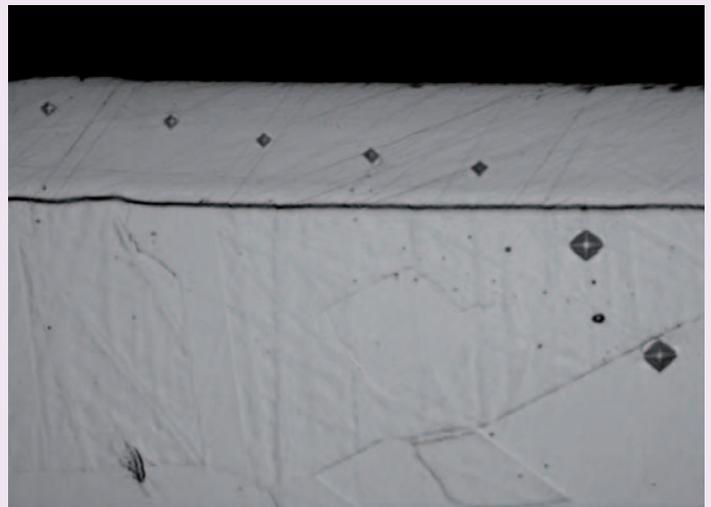
The Expanite treatment is a major benefit for many industries due to the decrease in downtime and the cost savings achieved.

Regulatory clearance for food industry

Expanite has conducted migration tests to document that austenitic stainless steel surface hardened with Expanite is in compliance with the requirements of the American FDA and EN1935 guidelines.

Benefits include:

- increased surface hardness up to 1200-1500 HV0.05 (depending on base material and surface conditions)
- non-galling and wear resistant demands of industrial fluid handling pumps



able solution - materials remain unchanged after treatment

This means that Expanite can develop and customize solutions for many different companies and industries.

Surface hardening

The Expanite technology can increase the value of products in many industries significantly - from knives and valves, via mixers and grinders for the food industry, to pump,