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CORROSION RESISTANT MATERIALS AND SOLUTIONS

# Stainless Steel in Hygienic Applications

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Stainless steels are appropriate materials for fabrication of equipment in a wide range of applications in the food, beverage and pharmaceutical industries due to:

- the ease with which surfaces can be kept hygienically clean
- the corrosion resistance, if grades are correctly selected

Effective cleaning processes have a significant impact on surface cleanliness.

Rough surfaces make cleaning more difficult.

# Stainless Steel in Hygienic Applications



These **two** major factors play a role in the selection of stainless steel in hygienic applications:



# Stainless Steel in Hygienic Applications



## Overview

- Composition
- Corrosion mechanisms
- Requirements for corrosion resistance in hygienic applications
- Surface finishes
- Family tree of stainless steels
- Fabrication including pickling and passivating
- Designing with stainless steel

**This presentation is drawn from over 70 years of NDE company experience and relationships with local and international suppliers including Outokumpu**

# Stainless Steel in Hygienic Applications



**Stainless steel is very often the material of choice for equipment in hygienic applications.**

**Providing that care is taken with the following issues, it can offer excellent performance:**

- Material selection
- Surface finish requirements
- Equipment and plant design
- Careful adherence to operating procedures

[www.nde.co.za](http://www.nde.co.za)

The logo for NDE, consisting of the letters 'NDE' in a stylized, outlined font. The 'N' and 'D' are connected at the top, and the 'E' is separate. The logo is positioned in the center of a white vertical band that runs through the middle of the image. Behind the logo, there are faint, light green circular patterns that resemble molecular structures or atoms.

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