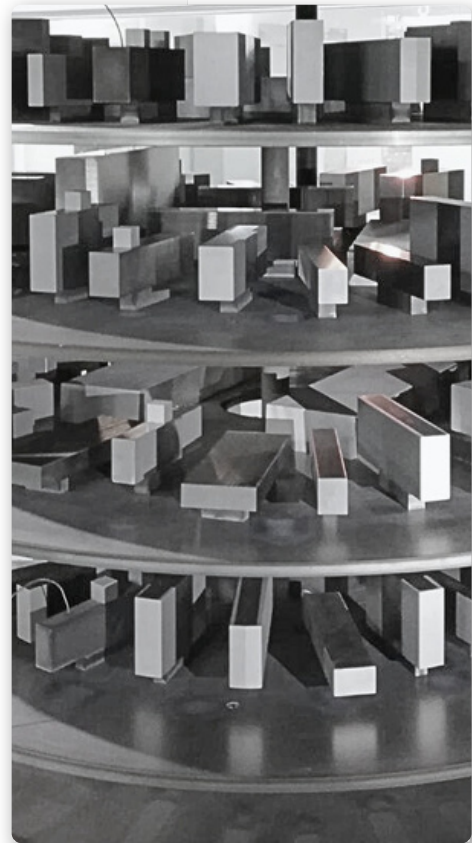
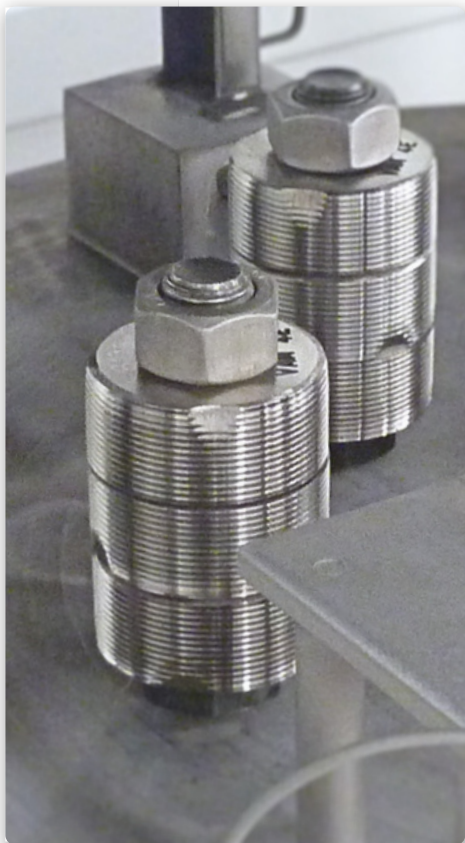


# Thread Rolling Industry

Plasma (Ion) Nitriding in the Thread Rolling Industry



Parts:

- **Thread Rolling Cylindrical Dies**
- **Thread Rolling Flat Dies**

Transmission parts in mechanisms of the Rolling machines – see Transmissions and Drive Systems Industry

Requirements:

- For high **Hardness**
- For high **Wear resistance**
- For high **Fatigue strength**
- For **Plastic deformation resistance**
- For **Lower friction**

Ion Nitriding Solutions:

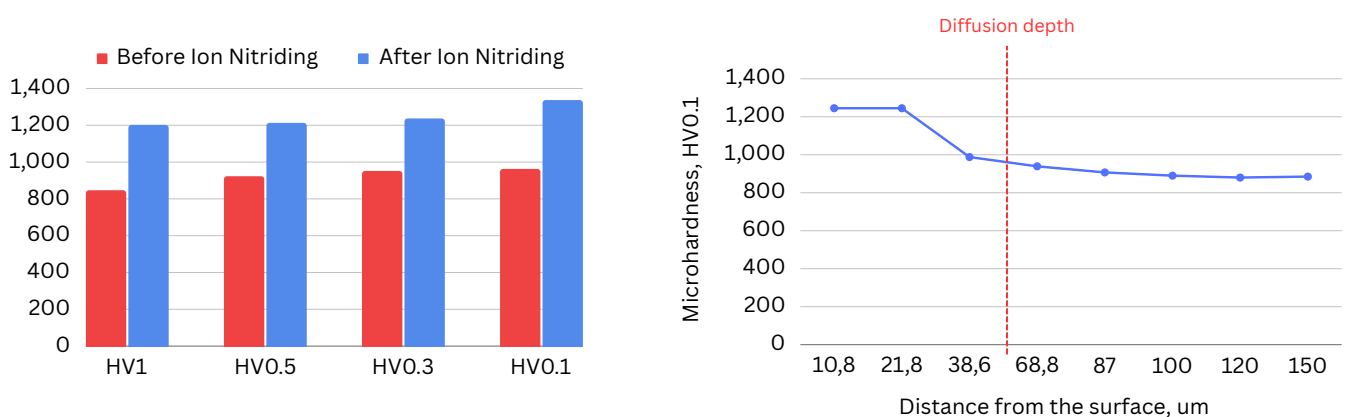
- **Significantly increasing the surface hardness, wear (abrasive and adhesive) resistance and fatigue life of the tools, improving their lifespan and performance.**
- **Improving the thermal fatigue resistance** of the tools.
- **Reducing the friction coefficient.**
- **Increasing the corrosion resistance.**

Improving these parameters **will save from downtime and maintenance costs.**

## Steel Grades Used:

Steel Grade	Surface Hardness, HV	Case Depth, um
M2 / HS 6-5-2 / 1.3343 / SKH9	1000 - 1300	20 - 80
M42 / HS 2-9-1-8 / 1.3247	1000 - 1300	20 - 80
T15 / HS 12-0-5-5 / 1.3202	1000 - 1300	20 - 80
Vanadis 4Extra	1000 - 1300	20 - 80
D2 / X153CrMoV12 / SKD 11	900 - 1200	20 - 80
D3 / X210Cr12 / SKD 1	1000 - 1200	20 - 80
A2 / X100CrMoV5 / SKD12	800 - 1000	20 - 80
DC53	700 - 900	20 - 80
SLD 10	1000 - 1200	20 - 80
ASP-23 / S790	1000 - 1300	20 - 80

- Hardness and depth values are recommended for the industry and exact values will depend on the nitriding process parameters.
- This is not a full list of used steel grades



- Example of **Vanadis 4Extra** special tool steel after Ion Nitriding - surface hardness and diffusion depth



## Equipment and Technology

Developed state of the art both Hot-Wall and Cold-Wall furnaces for Plasma (Ion) Nitriding.

## Know-How and Expertise

We share our knowledge and expertise on nitriding different steel grades and parts, gathered for more than 45 years.

## Support

We give full-time support.



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