

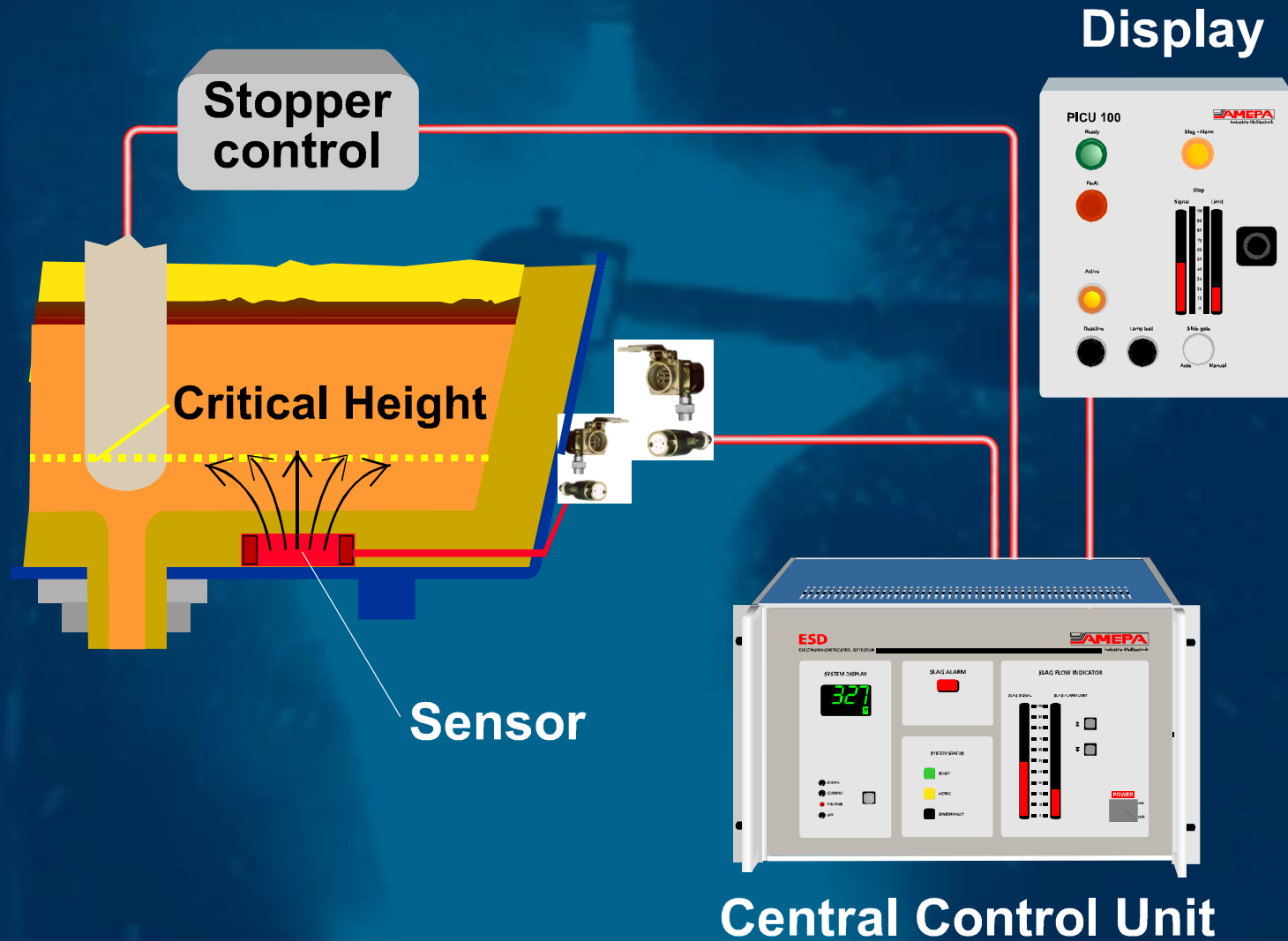


## Residual Steel Detection

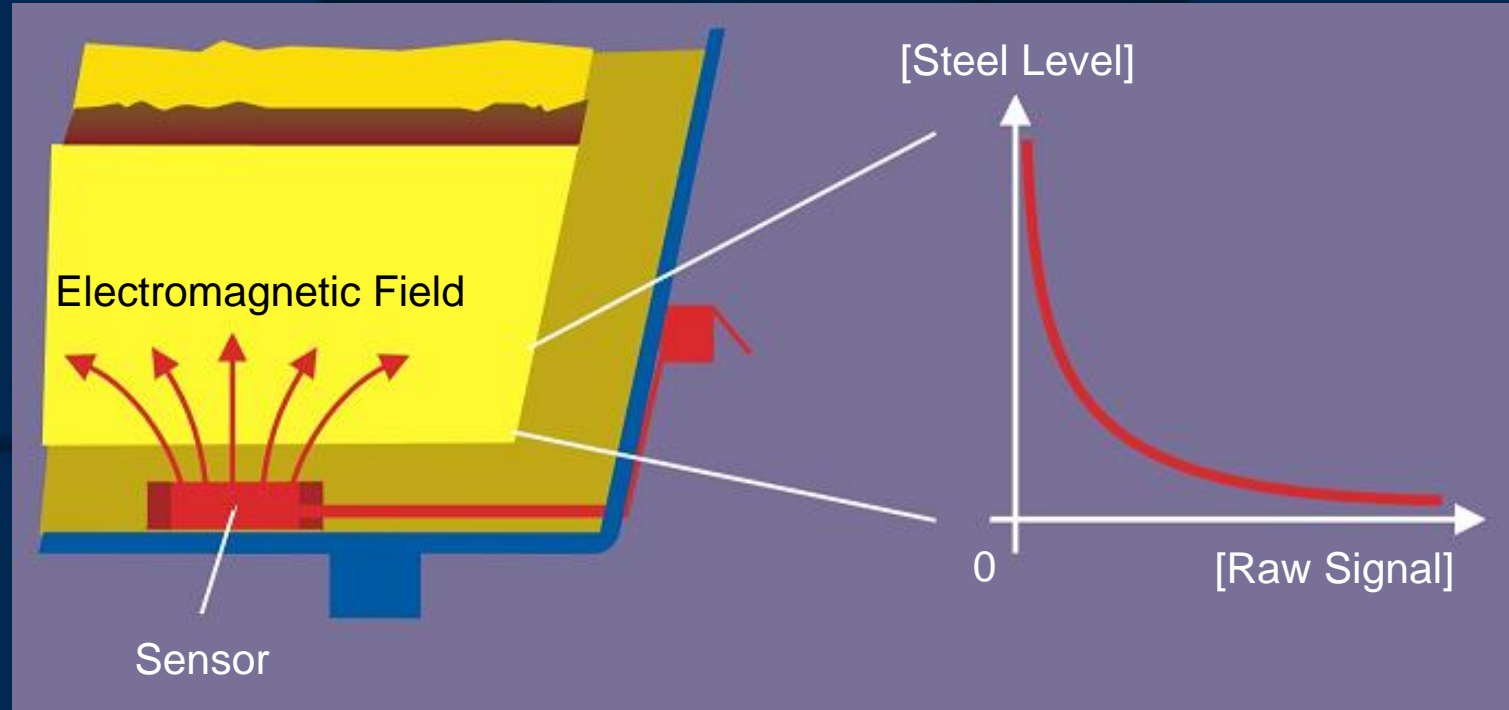
Amepa GmbH  
Karl-Carstens-Str. 12  
D-52146 Wuerselen-Aachen  
Tel: +49 2405 40808 0  
Fax: +49 2405 40808 44  
E-mail: [Info@amepa.de](mailto:Info@amepa.de)

- **System Layout**
- **Measurement Principle**
- **Sensor Installation**
- **Customer Results (TKS)**

# System Layout

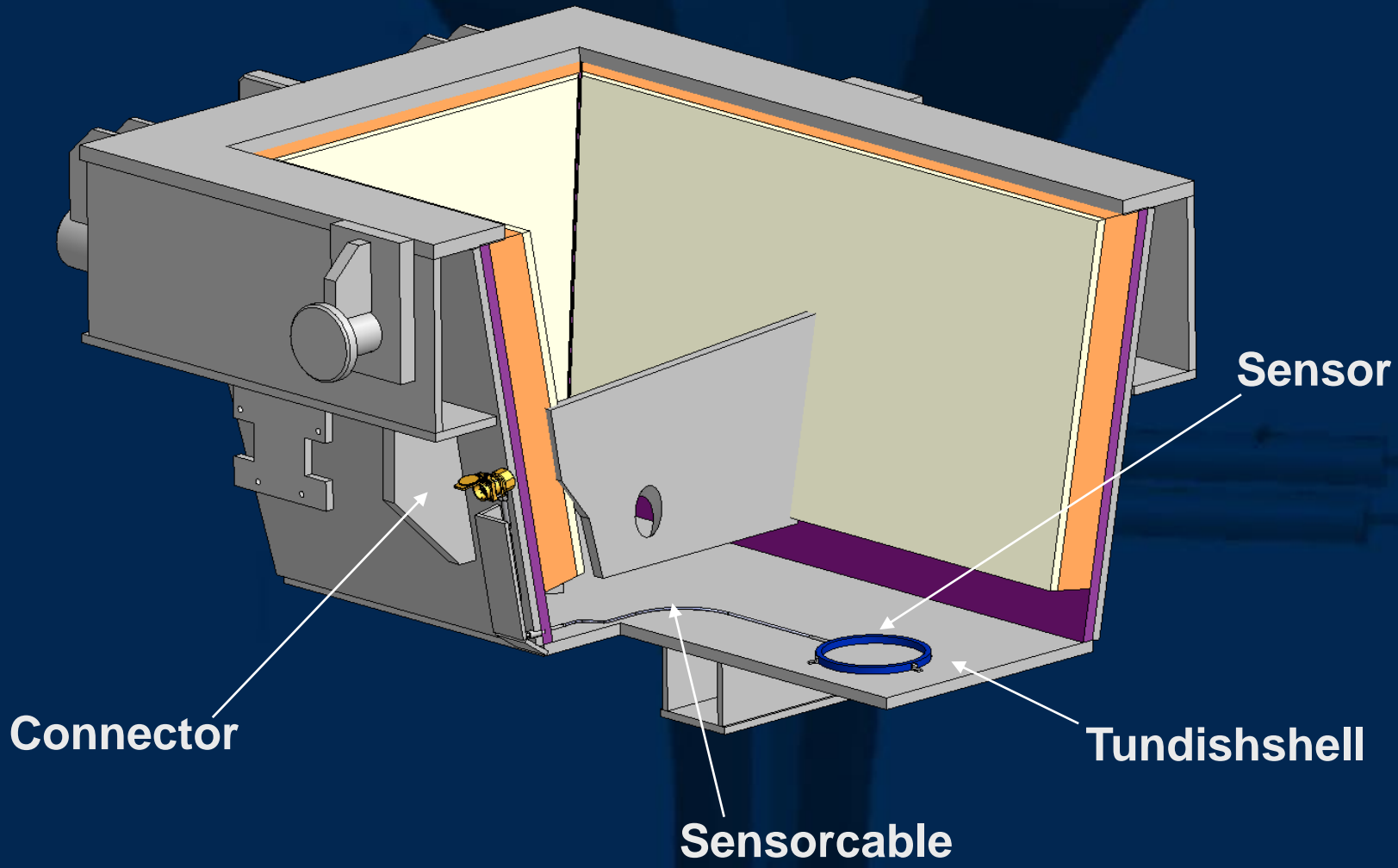


# Measuring Principle

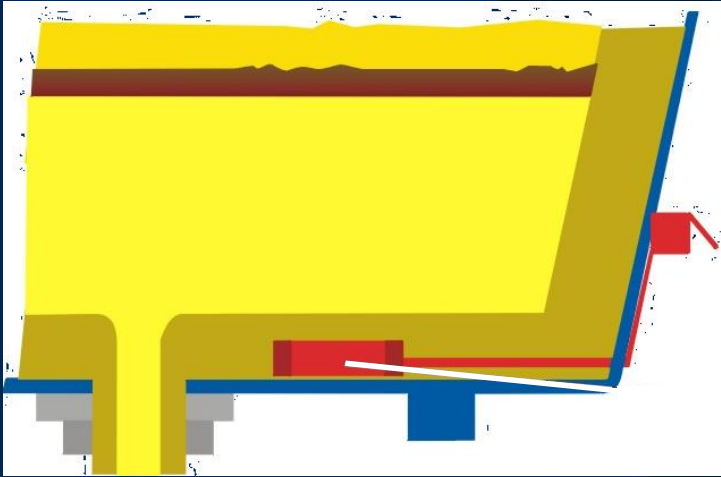


1. Sensor consists of a primary coil and secondary coil.
2. The primary coil is fed with alternative current and generate an electrical magnetic field in the liquid steel.
3. The secondary coil detects the resultant electric magnetic field and generate secondary voltage, from which suitable signal processing then enables to determinate the steel level.

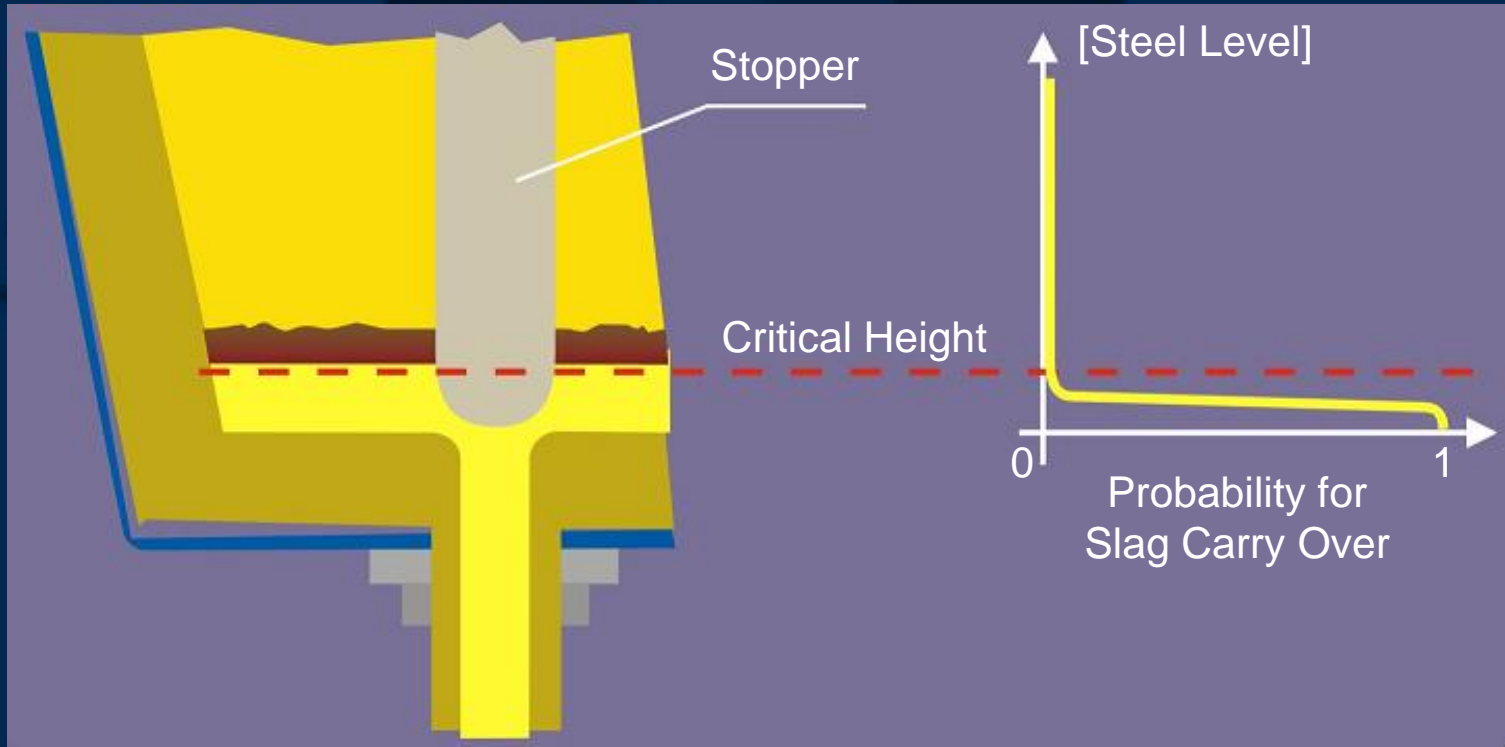
# Sensor Installation



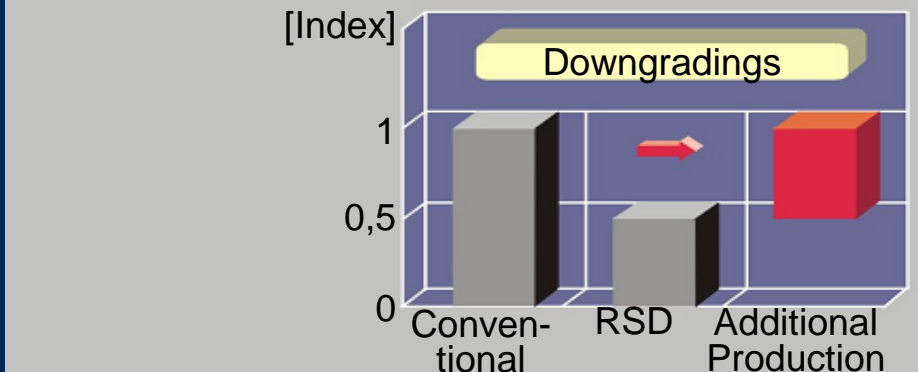
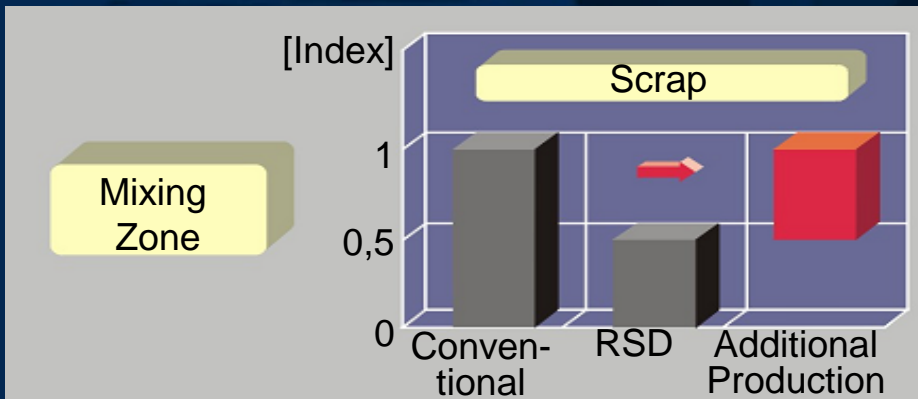
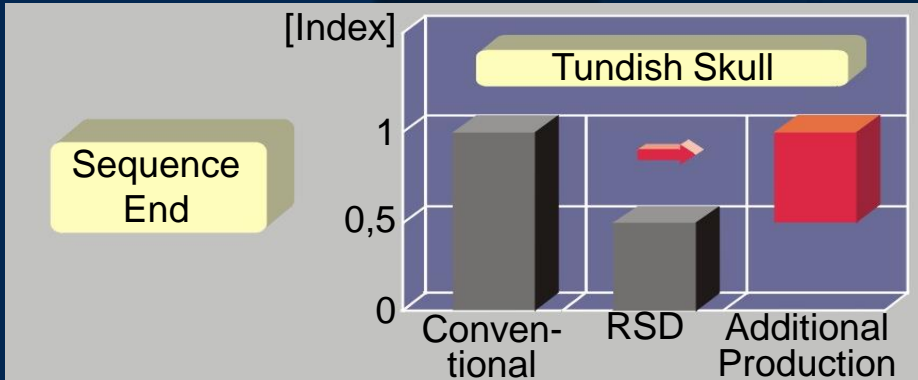
# RSD Sensor Installation



# Critical Tundish Vortex Heights

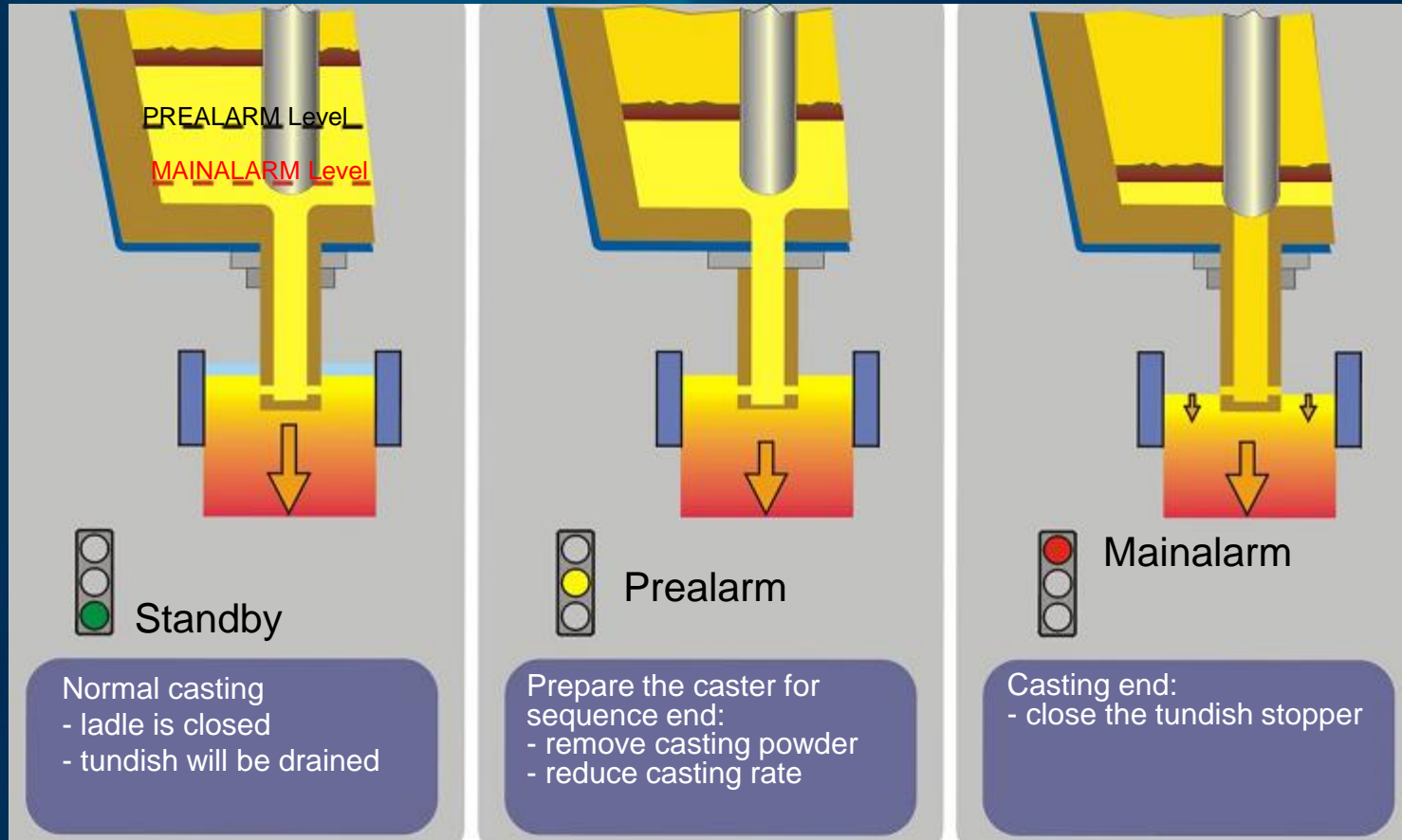


# RSD – at Operation





# RSD 100 for Sequence End

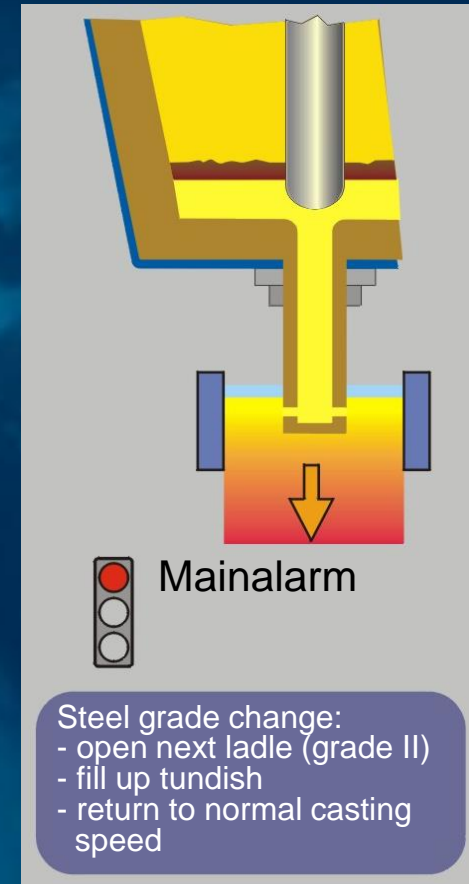
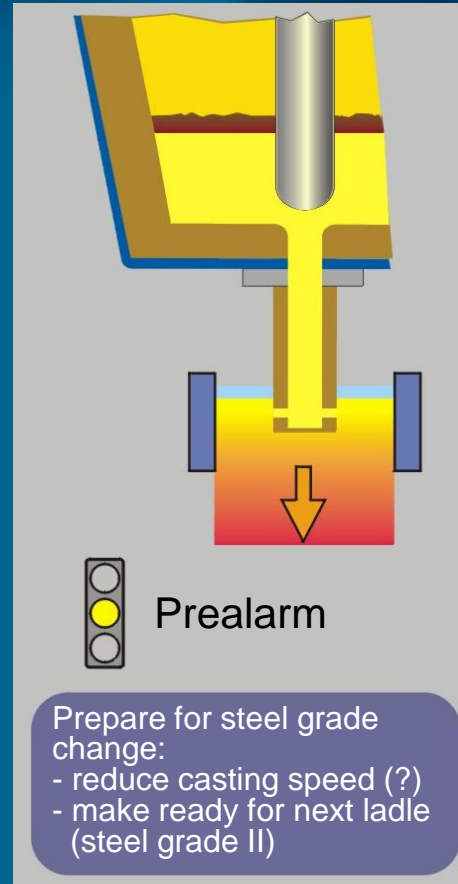
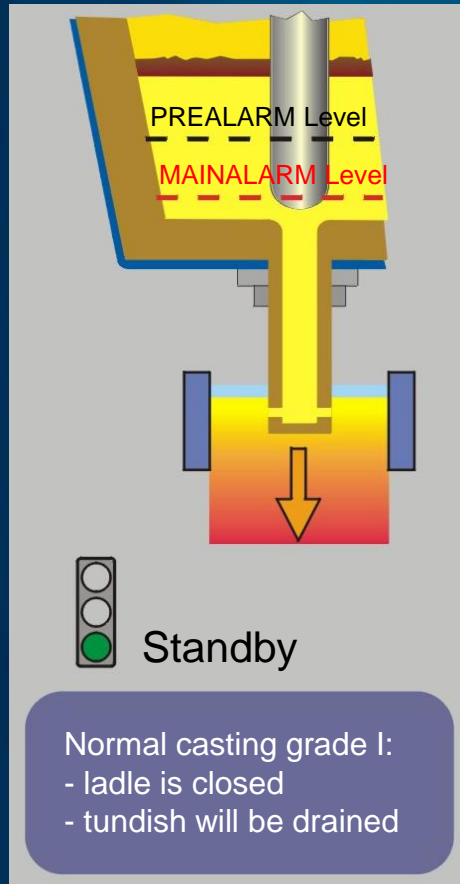


# Results for sequence end (TKS – Report)



In a German steel plant with a **40 ton** tundish the average yield improvement was about **5 ton** steel per tundish closure. This 5 ton improvement corresponds with a reduction of the heights of **tundish skulls** from **19 cm** down to **7 cm**.

# RSD 100 for Steel Grade Change



# Results fo steel grade changes (TKS – Report)



Steel level in  
tundish

In a German steel plant with a 40 ton tundish the residual steel level with steel grade changes was changed from 45 cm to 15 cm resulting in a reduction of non-prime slabs.