Case Study Z2e² PRO Coating
-lower dross adhesion & increased crucible lifetime

Info
Product name: TBNS 587 Z2e² PRO Coating
Application: Aluminum sand casting
Casting parts: Casting parts for mechanical engineering, HVAC, medical engineering and robotics

Parameters
Furnace: Gas fired
Capacity: Ca. 500 kg (1102 lbs.)
Temperature: 720 - 730°C (1328 - 1346°F)
Alloy: AlSi7Mg, AlSi10Mg, AlSi8Cu3 (226)

Benefits – Comparison of Z2e² PRO Coating against existing crucible*

lower dross adhesion  
increased lifetime  
less crucible change overs  
increased thermal conductivity

*For more details, please refer to page 2.
Existing Crucible
The customer experienced a thick slag adherence, in spite of regular cleaning. This reduced the crucible capacity and also caused a drop in thermal conductivity. As a result, the crucible had to be replaced frequently.

TBNS 587 Z2e² PRO Coating
The customer tested the Syncarb Z2e² crucible with PRO coating. The service life of the crucible almost doubled to 220 batches (132 tons of metal) when compared with 'energy saving' crucibles from a competitor.

The crucible wall shows slight slag adhesion because the crucible was not cleaned after the last batch. The slag was so loose on the surface that it could be "peeled" by hand.

It is noteworthy that no loss of thermal conductivity was detected during operation.

Life Time

<table>
<thead>
<tr>
<th>Product name</th>
<th>Lifetime</th>
<th>Lifetime improvement</th>
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<tbody>
<tr>
<td>Existing Crucible</td>
<td>110 batches</td>
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<tr>
<td>TBNS 587 Z2E² PRO Coating</td>
<td>220 batches</td>
<td>Lifetime doubled</td>
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</tbody>
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Benefits
- Less energy consumption due to reduced dross adhesion
- Easier cleaning
- Improved lifetime
- Less number of crucible change overs
- Better thermal conductivity