



Process engineering elements



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Aluminothermic welding technology

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One-shot crucible T3



*Formation
Design variants
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Economic efficiency
Application*

One-shot crucible T3

Version cardboard

Version metal can

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One-shot crucible T3

The first one-shot crucible was originally developed by **Railtech International** in France. Railtech thus reacted to the well-known disadvantages of the long life crucible that has been used until then. It has been possible to continually improve the quality of the welding due to the securely installed stoppers and the constant reaction conditions.

Based on the fundamental principle **Rolf Plötz** developed the patented crucible 2000 with the idea of always maintain the ideal conditions for the aluminothermic reaction. To this end the aluminothermic reaction portion is already filled into the crucible that has been further developed into a transportation vessel in a climate-controlled environment.

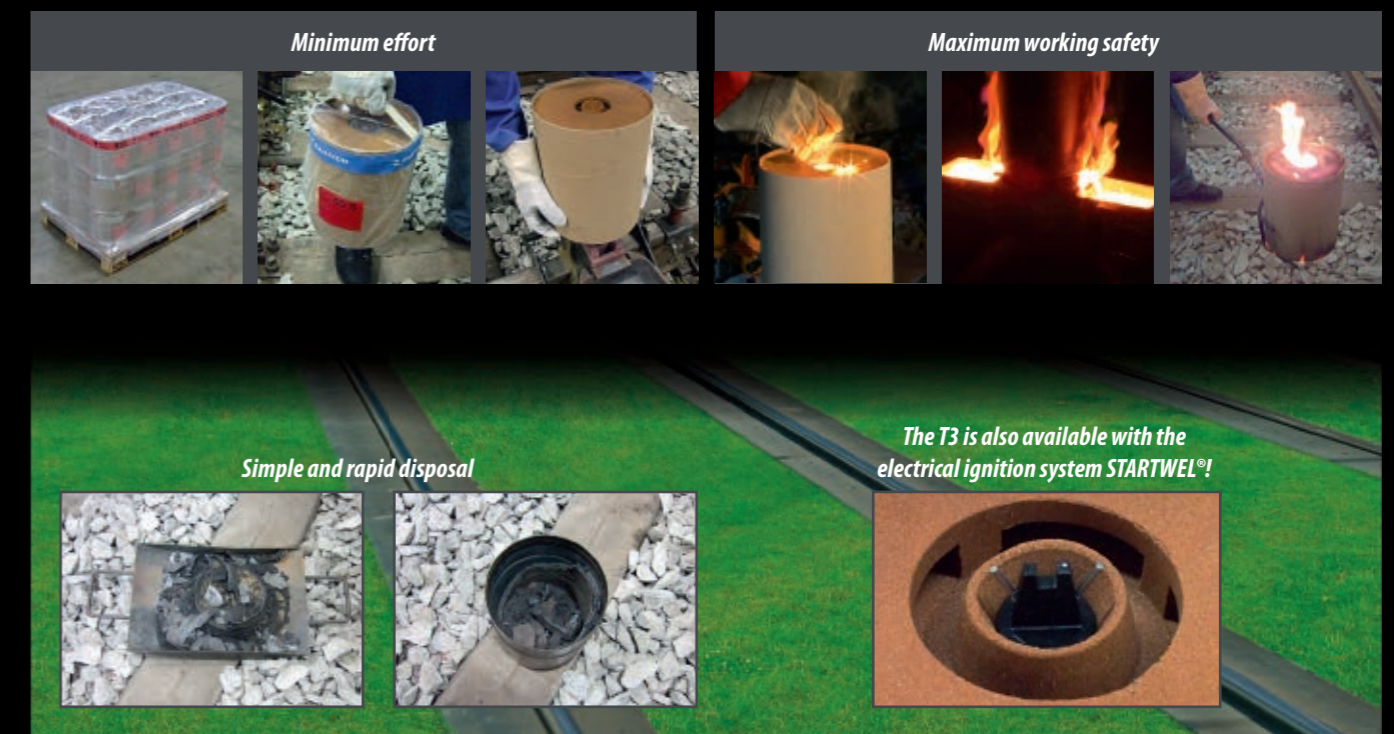
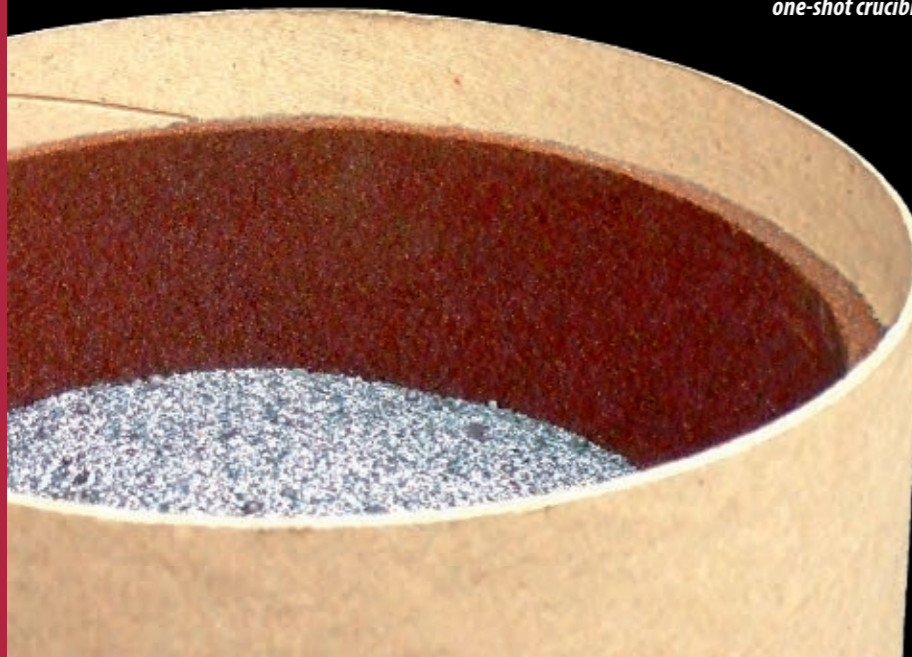
Economic efficiency and use

- Minimum amount of work involved during the welding preparations and during the welding.
- Simple and rapid disposal by means of the complete disintegration of the fire-proof interior crucible.
- A broad range of potential profiles can be covered due to the well thought out scaling of the portion sizes with low stock levels.
- No additional portions are necessary for the large gaps (L50, L70).
- High levels of process reliability reduce the error quota and thus minimise potential repair expenditure.

Version in cardboard

A very pure, elastic and homogeneous steel is produced in the one-shot crucible T3 at the exclusion of the atmosphere.

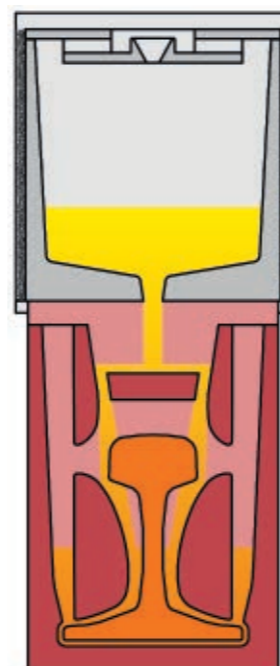
Version metal can



Technical details

- The one-shot crucible can be used immediately without any preparations being required; it is not necessary to fill it in portions.
- The pre-assembled thimble is matched to the energy content of the welding mass.
- The defined crucible cross-section guarantees a steady and constant reaction.
- The special design of the crucible lid prevents reaction mass escaping.
- The centered fit of the one-shot crucible encloses the sprue area of the mould types.
- The low drop height of the liquid steel minimises the uptake of impurities within the weld deposit.
- The weatherproof packaging is kept until it is used.

Appropriate welding portions are available for all kinds of rail grade.



Quality and reliability

- Our
- careful selection of the raw materials,
 - continuous production monitoring,
 - continuous inspection intervals

lead to the reliable and constant quality of our welding portions in the one-shot crucible. The combination of the appropriate moulds and tools produces the ideal welding results.



Regular audits according to the recognised international standard (ISO 9001 : 2008) by the DNV as well as the Deutsche Bahn AG guarantee reliable and high quality products at all times.

Customers in more than 70 countries throughout the world profit from our many years of experience in the rail sector and intensive research in the area of aluminothermic welding technology.