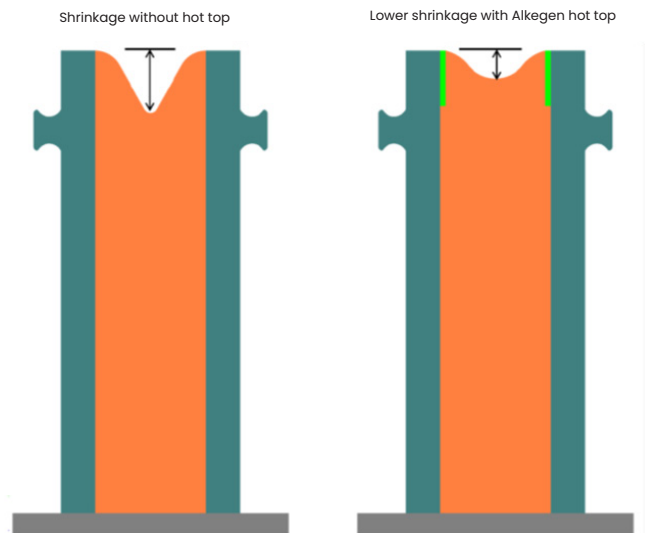




Thermshape™ Hot Tops for Steel Industry

BUSINESS CHALLENGE

Steel producers employ various methods for the production of steel ingots (large slabs). For large volume and high output, the modern production method employs the use of a continuous casting process. For producers of special grades of steel the more traditional method of ingot molds are used in production. This uphill casting technique involves the pouring of molten steel into the base of the mould (using a refractory lined transfer system). As the liquid steel fills the mold it cools and solidifies. The aim is to maintain metal temperature as high as possible during casting to avoid surface and structural defects of the ingot. Lining the upper section of the mold using a ‘hot top’ system achieves this.



SOLUTION

Alkegen manufactures Thermshape™ hot top preformed shapes using a vacuum forming process. These hot tops are used in steel ingot casting applications to keep the top of the ingot mold hot during the cooling down stage of the casting process. The use of hot tops helps lower metal shrinkage of the metal during improve steel quality and surface finish, as well as the casting yield. Alkegen has successfully supplied Thermshape™ hot tops in the following grades - Fiberfrax™, Isofrax™ and Fibermax™. During manufacture, Refractory Ceramic Fibres or Alkaline Earth Silicate Wools (non-classified fibres, under EU health and safety regulations) are combined with specially selected inorganic and organic binders to produce rigid shapes with exceptional insulating characteristics.

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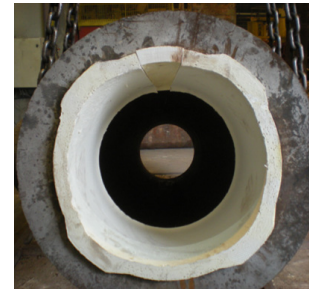
CUSTOMER ADVANTAGES

- Reduced shrinkage
- Improved yield
- Adhesive not required
- Self supporting
- Easy to install
- No requirement for drying

BOTTOM LINE

Thermshape™ hot tops, using Fiberfrax™, Isofrax™, or Fibermax™ grade materials are proven in this demanding application. End users enjoy several benefits provided by the vacuum formed shapes including the production of high quality steel. Thermshape™ hot tops are a unique product offering from Alkegen. They are specifically designed to offer the best insulating properties for the demands of this application. Their unique characteristics achieve much better insulation than any of the competitive hot tops currently available.

Alkegen has an extensive range of vacuum forming manufacturing sites strategically located across the globe. Utilising the very latest production techniques, Alkegen has gained a wealth of experience in the development and supply of a variety of shapes and grades to meet the demands of the steel industry, and this application, in particular. The vacuum forming production process permits considerable freedom to vary shape, thickness



and hardness. This allows us to offer an extensive product range based around chemical, physical and mechanical properties. The choices available to customers allows the freedom to source the ideal solution for their needs.

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The test data shown are average results of tests conducted under standard procedures and are subject to variation. Results should not be used for specification purposes. Product Information Sheets are periodically updated by Alkegen. Before relying on any data or other information in this Product Information Sheet, you should confirm that it is still current and has not been superseded. A Product Information Sheet that has been superseded may contain incorrect, obsolete and/or irrelevant data and other information.

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