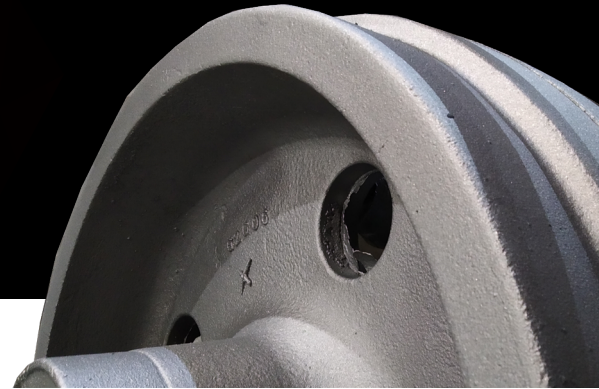


## Zircon free refractory coating for steel and heavy iron castings

### KNOWLEDGE & PARTNERSHIP



#### THE CHALLENGE

The natural radiation emitted by zirconium coatings has been known for a long time. Although it is a natural radiation, many foundries are interested in eliminating it from their facilities if possible. Add to this concern the scarcity of zirconium in the market and the escalating prices that reflect this, and the search for an alternative coating becomes increasingly interesting.

#### FOUNDRY:

Piezas y Rodajes S.A. (PYRSA) is a low-medium alloy steel foundry in Spain, producing more than 18,000 tonnes per year of finished castings for the mining, highspeed rail, and agricultural sectors. Of these, large-scale castings for the mining industry are PYRSA's major activity – a sector that is characterised by growing technical demands.

#### PARAMETER

**Alloy:** Carbon steel  
**Casting weight:** 100-500 kg  
**Pouring temp.:** 1,580°C  
**Pour time:** 8-12 s  
**Moulding Process:** Horizontal moulding line, green sand, phenolic urethane binder

#### FOSECO PRODUCTS

TENO\* Tec ZA 7000 K coating  
ECOLOTEC\* binder  
STELEX\* ZR filters  
STELEX PrO filters  
KALMINEX\* sleeves  
VAPEX\* stopper

## OUR SOLUTION

After many trials and tests, Foseco has found refractory material that can be used to produce a new family of non-zirconium and radiation free coatings. This new family of refractory coatings (TENO Tec ZA) maintains the requirements for refractoriness and its application. In the case of Pyrsa, TENO Tec ZA 7000 K was used to replace the zirconium coatings.

## KEY BENEFITS

- Eliminate zircon radiation from coatings
- Reduce casting cost due to the most competitive price of the new fillers coating
- More stable coating costs by eliminating zircon price variability

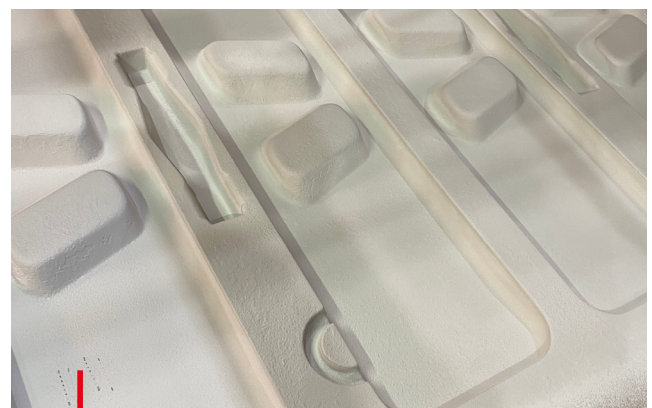
> LET'S LEARN MORE



## THE OUTCOME

At Pyrsa, the Teno TEC 7000 K has been used in flow coating, brush and spray gun applications without any problems. A refractory coating similar to the old zirconium paints was achieved, with very good surface quality results on the parts. The goal of eliminating natural radiation and reducing costs with much more stable prices due to the new Foseco developed refractories has been achieved.

TENO Tec ZA coating



Homogeneous and smooth coating film

THINK BEYOND. SHAPE THE FUTURE.



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