

Greening the Steel Industry



Innovation Potential of Steel

THE UNITED STEEL COMPANIES LIMITED,
CENTRAL RESEARCH DEPARTMENT,
STOCKSBRIDGE,
Near SHEFFIELD.

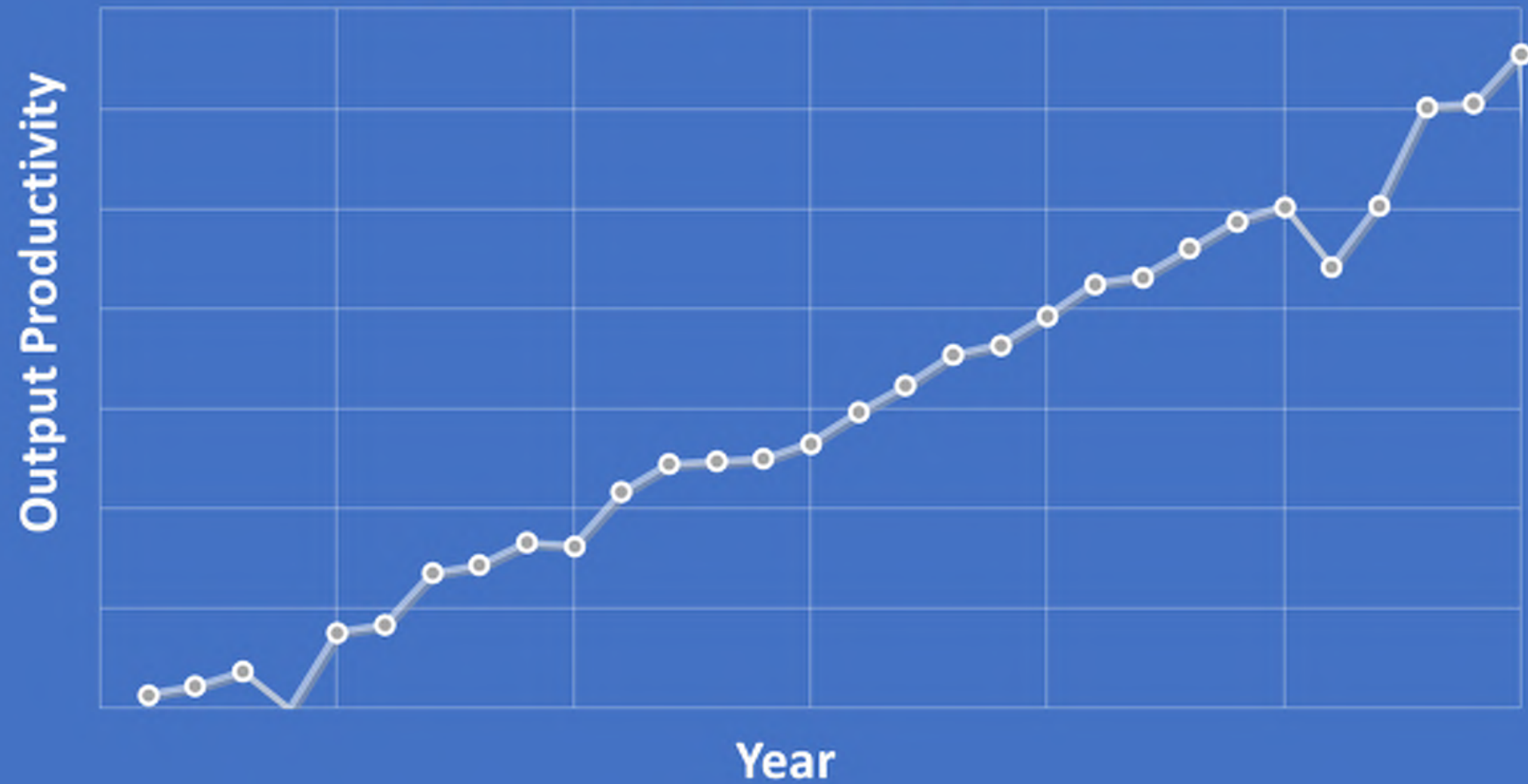
5th December, 1940.

Dr. Swinden.

RADIOACTIVE LABELS FOR REFRACTORY INCLUSIONS

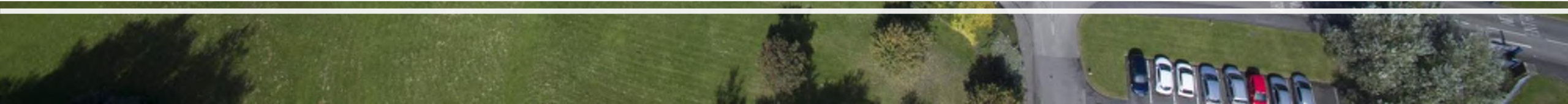
In a letter to the American Ceramic Society (Bull. Am. Ceram. Soc. May, 1939), Dr. Sosman of the United States Steel Corporation suggested the possibility of making use of radioactive casting pit refractories to determine whether any of the inclusions in steel came from the bricks. As an example of the method that might be employed he suggested that thorium could be added to the casting pit refractories and the presence or otherwise of thorium in the steel demonstrated by cutting and polishing the steel and placing it in contact with a photographic plate. Subsequent enquiry showed that Dr. Sosman had not carried out any such experiments but that certain other firms, e.g. the Timken Bearing Company, were intending doing so.

UK STEEL INDUSTRY





Materials Processing Institute



Institute Activities

- The Institute is independent and not-for-profit.
- Developing and commercialising new innovation for the metals sector and broader foundation industries.
- Work with the sector globally and supports SMEs in Teesside



ADVANCED MATERIALS

Research in advanced materials to understand how they can be used more efficiently and effectively and develop new and innovative materials.



INDUSTRIAL DECARBONISATION

Working to reduce carbon emissions through enhanced use of energy to develop a low-carbon future globally.



DIGITAL TECHNOLOGIES

Utilising digital technologies to optimise industrial processes and develop advanced materials.



THE CIRCULAR ECONOMY

Research to minimise resource usage, waste, emissions and energy leakage through improved design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling.



Improving steelmaking processes

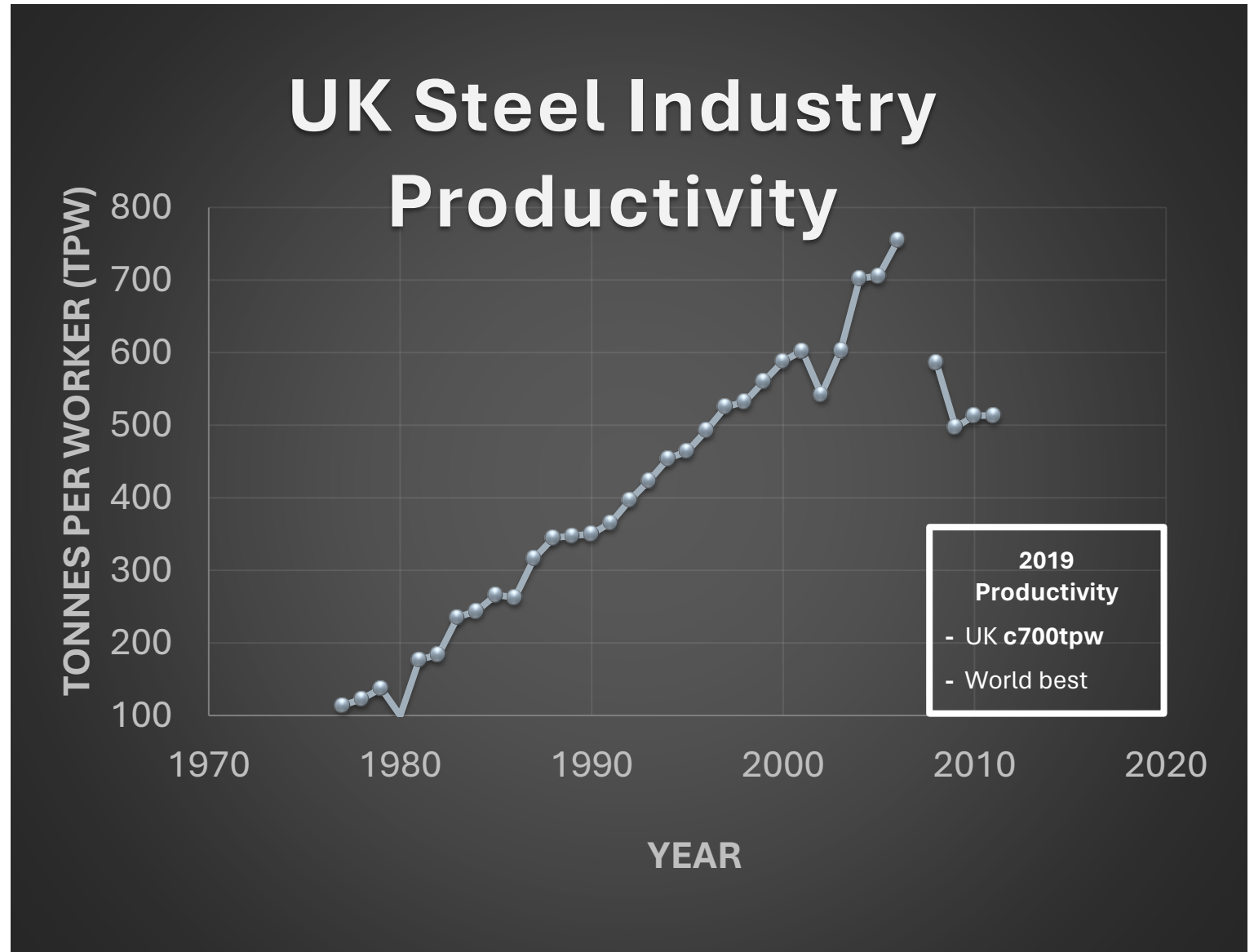
Using the Institute's experience with large items of process plant and equipment, often operating in hot and hostile environments, to deliver simple robust solutions to complex engineering problems.



Going Green & Going Smart

“To protect the environment is to protect productivity and to ***improve the environment*** is to ***boost productivity***”

President Xi of China



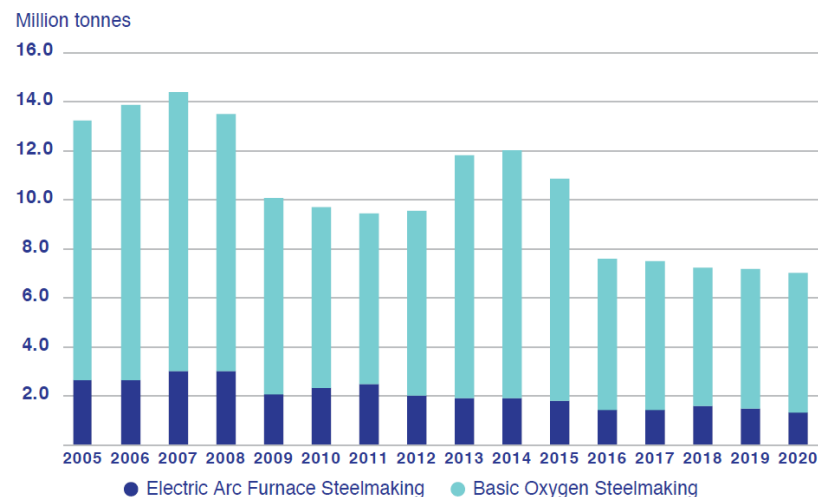
Market Opportunity vs Industry Performance

FUTURE CAPACITIES AND CAPABILITIES OF THE UK STEEL INDUSTRY

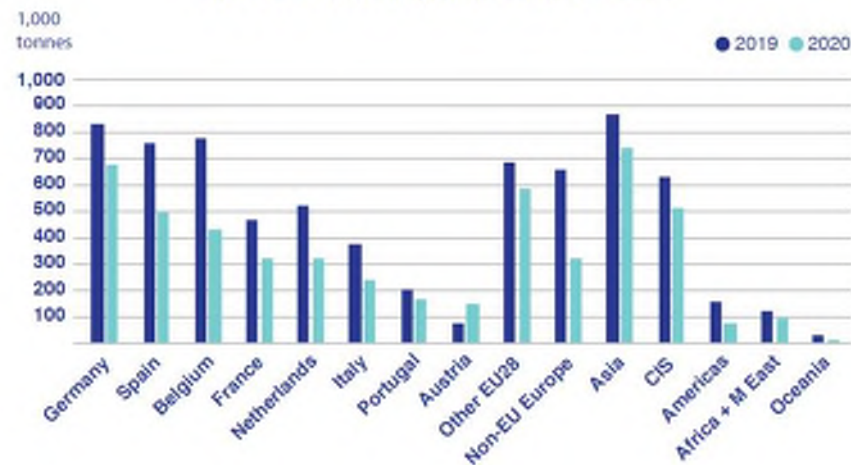
BEIS Research Paper Number 26
Summary Report

15 December 2017


Annual crude steel production 2005-2020



UK steel mill imports 2020 vs 2019







**De-industrialised
OR
Post-industrial?**



COP²⁸
UAE



Global Context