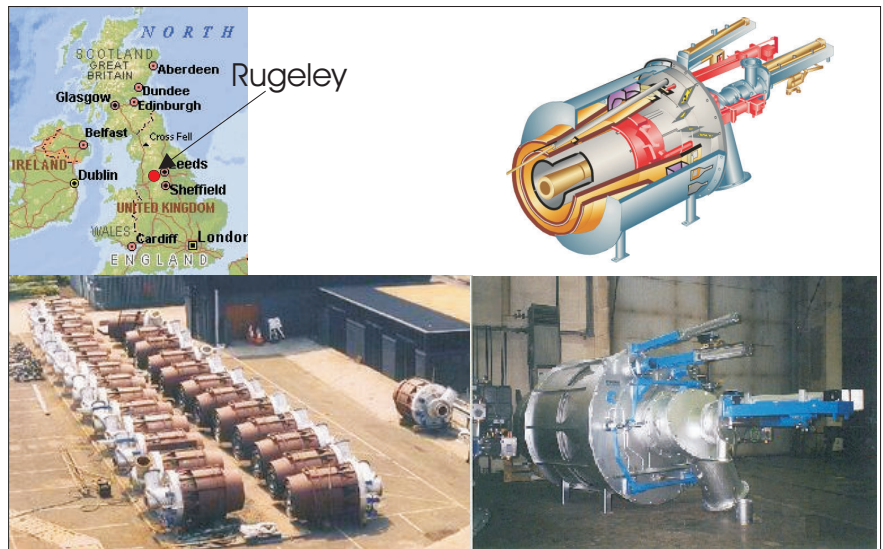


The WR Combustion Systems

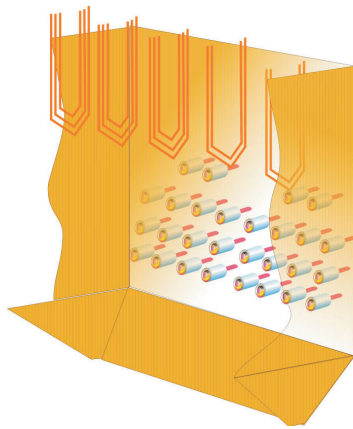
The advanced WR combustion technologies.
Installation on the Rugeley Power Station in England.

In 1995 BWSC (then:BWE) contracted an order to retrofit two 500 MWe units at the Rugeley Power plant in England.

The main objective in the project has been to implement primary Low NO_x measures on the plant to make it compliant with current and future EU emission limits. The plant has been equipped with the advanced Wide Range (WR) combustion system from BWSC that enables firing of a wide range of coal fuels as well as oil.



The WR windbox burner units are provided with individual airflow controls and individual flow measurements for airflow balancing. It has been installed at Rugeley as a coal/oil burner. The 2 x 28 burners are 56 MW_{thermal} each.



The WR Low NO_x burner can be a combined coal/oil/gas burner with full thermal capacity on each fuel. The basic design of the WR Low NO_x burner features four independent airflows: the primary, the secondary, the tertiary and the core airflow.

Each of the installations at Rugeley PS is consisting of 28 WR burners. The burners are arranged in front firing, both furnaces are divided in two sections by division walls.

More than 500 burners of the WR type have been supplied. The combustion technique has been developed during the last 50 years within the utility business and today it represents the absolute state-of-the-art within combustion technology.

Coal fuels are ranging from very low reactive import coals up to subbituminous normal coals.



The advantages achieved by the retrofit have been:

- NO_x below 650 mg/Nm³
- UBC levels below 5%
- Improved fuel flexibility
- Improved Load Range

Rugeley Power Station is located north of Birmingham, in a former mining area, today transferred into an environmentally protected beautiful natural park.

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