



**FEDERATION TOWER, MOSCOW
HARGREAVES DRAINAGE LIMITED**

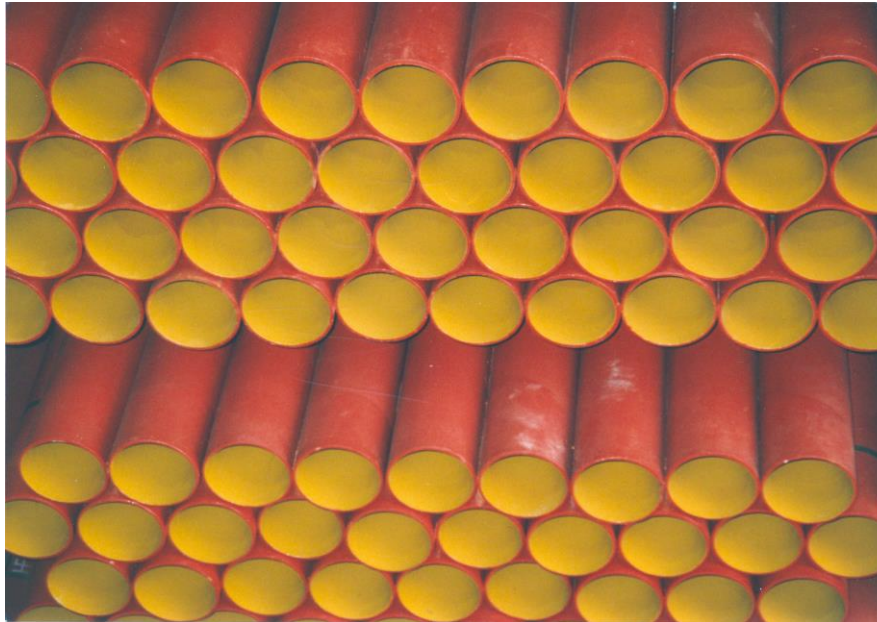


Hargreaves Drainage Limited, one of the UK's oldest traditional cast-iron manufacturers, has helped to shape the skyline of modern Russia, with a contract to supply 96 tonnes of internal cast iron rainwater and drainage systems for the futuristic Federation Tower in Moscow.

Distinctive for its curved shape and central spire, the £305million, 87 storey building is 340 metres (448 metres including its spire) high, dwarfing Europe's other skyscrapers, including the previous tallest building titleholder - Frankfurt's 260 metres Commerzbank Tower and the 330 metres Eiffel Tower.

Hargreaves supplied some 5.2 kilometres of rainwater and drainage equipment from its innovative new Halifax lightweight cast iron system. Russian installers Armo Group fitted the socketless soil and drainage systems, which feature a unique time-saving single steel coupling.

Sergei Glukharev, Director of Halifax Russia Limited, said: "The Halifax system was chosen for its quality, versatility and speed of installation. It has the major benefit of allowing pipeline installation to begin from any point and in any direction within a building and this provides major value with a building of this size and the single-coupling system reduces the risk of mistakes during installation.



Halifax lightweight cast iron pipes

'One of the major benefits of using a cast iron system such as Halifax is the low fire risk. By Russian law, any building higher than 75 metres must install a cast iron drainage system. The Halifax system also offers noise reduction characteristics, important since sewerage has to be channelled from the eighty-seventh floor to below-basement level.'



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