

CI/SfB 125	(2-)	(W7)
Common Arrangement C40/J30/J31/P22		

Project: New Glass at Hitaveita Suðurnesja Geothermal Power Plant and Onsite Renovation and Protection at Bláa Lónið (Blue Lagoon), Iceland

Date: July 2004

Since 1977, *Hitaveita Suðurnesja* power plant has been producing some of Iceland's electricity and heating requirements by extracting geothermal energy from natural steam, hot water, and hot dry rocks in the Earth's crust. In addition, water from the plant is used to heat up the nearby *Bláa Lónið* (Blue Lagoon), a popular tourist resort.

For many years, harsh chemicals were required to clean the glass at the power plant. Glass can easily become opaque due to silica contamination if not cleaned regularly.

Despite frequent cleaning and the use of harsh chemicals, the glass would quickly become dirty again. In addition, with the introduction of the ISO 9001 standard in 1990, the glass had to be cleaner to meet the required standard. An effective alternative had to be found, and ClearShield was the unique solution.



Today, glass at the power plant looks newer for longer and is always easier to clean thanks to ClearShield

ClearShield prevents contaminants – in this case silica – from bonding to the glass surface. It can be applied either in the factory prior to installation or onsite.

In 1994, over 1,000m² of new exterior glass pre-treated with ClearShield was installed. Since then, silica build-up on the glass has been minimal. Also, the frequency of cleaning the glass is reduced and is always much easier to clean.

ClearShield proved to be so successful that the nearby *Bláa Lónið* resort had similar treatment in 2004. Some 700m² of glass in spa areas was fully renovated before the application of ClearShield, all treated onsite.

Today, both the workers of *Hitaveita Suðurnesja* and visitors of the Blue Lagoon enjoy a cleaner environment. Minimal maintenance – without the need for harsh chemicals – is adequate to keep the glass looking pristine.



Heavy silica contamination on a glass door at the *Bláa Lónið* resort prior to ClearShield renovation and protection