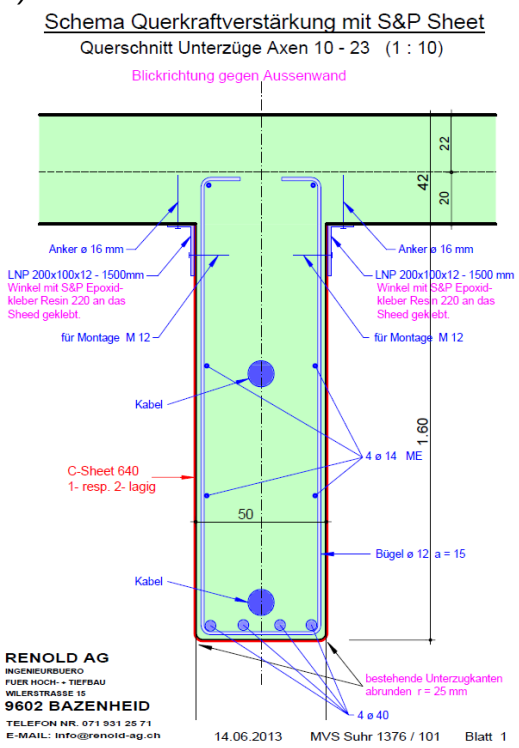
Case study_2013_01

Shear reinforcement with S&P C-Sheet 640

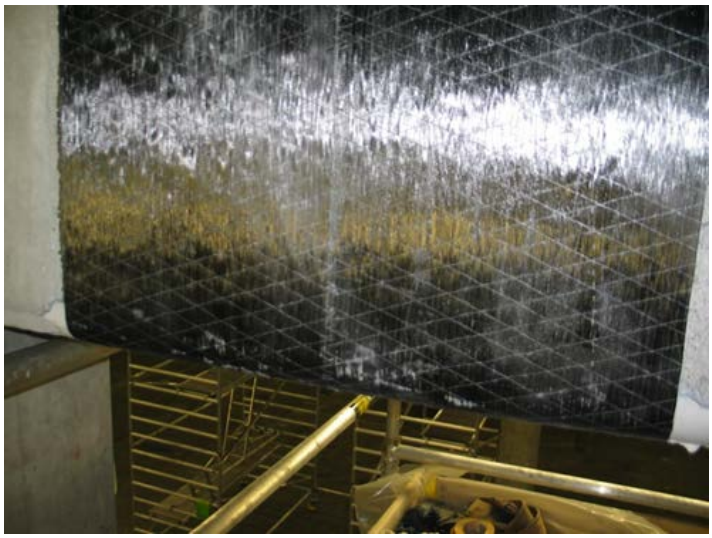
Project:	Migros distribution centre in Suhr, Switzerland (AG / CH)
Year:	2013
Background:	In Suhr, Migros operates its largest distribution centre in the country. To optimize their operation processes, the imposed loads in the main building were increased.
Statics:	The statics investigation shows that the majority of the prestressed concrete beams need to be reinforced partially against shear stress.
Solution:	With one or several layers of S&P C-sheets 640 (E-modulus 640 kN/mm²), the lacking reinforcement is applied onto the prepared substrate's surface. This carbon fibre mesh absorbs the shear forces as required, at a deflection of max. 2 per mille. The gradation of the sheets is carried out according to the framework model. The shear forces in the compression zone are anchored using steel L-brackets.
Material consumption:	Approx. 1'200 m² S&P C-Sheet 640 /
Timeframe:	Approx. 4 months, in stages, without disturbing the centre's operation
Images:	*a) Reinforcement diagram* *b) Partial reinforcement with anchoring in the ceiling* *c) Sheets laminated with epoxy resin (S&P Resin 55), rounded edges* *d) Partial reinforcement with anchoring in the ceiling (work in progress)*

a)



b)

c)



d)