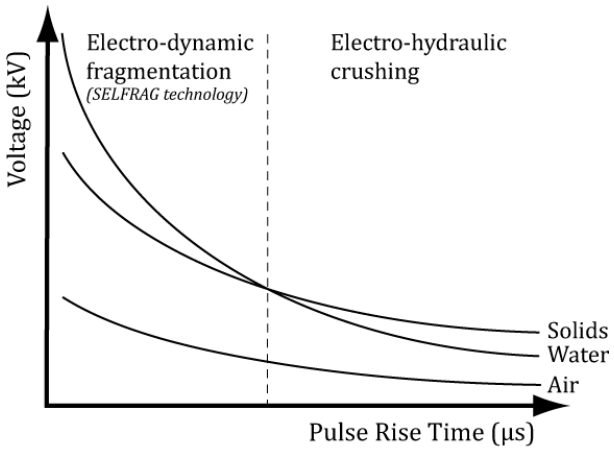

Figure 1 Physical principal of electrodynamic fragmentation by the reduction of pulse rise time to increase the breakdown voltage of water.

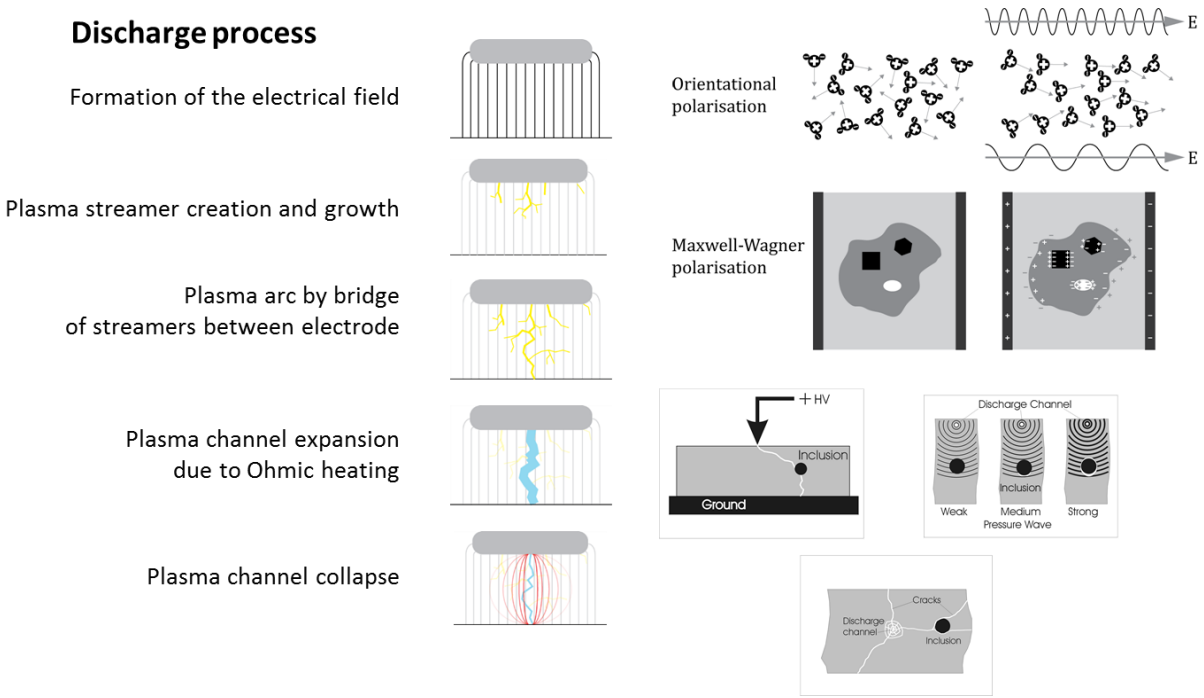

Figure 2: Effects of the electrodynamic process to water and solids in a evolving electrical field to a discharge.

Figure 3: Figure 3: Samples used for the process development. Lab scale tests of WP 1& 2 used upper left in dimension 40x40 mm. Below left was used to test large forms in Plant D setup in WP 3. Right shredder sample was used in WP 3 in plant E setup.

Table 1: Description of available samples available for WP 1 & 2

		SAMPLES LIST					
Send to Partner	**Label**	**Type of composite**	**Type of fiber**	**Samples setup**			
				# sample	**Length x width [mm]**	**Thickness [mm]**	**Weight [g]**
SELFRAG	**TSC01**	Thermoset Composite	Continuous and long fibers	19	50.01 x 50.06	4.39	16.22
SELFRAG	**TPC01**	Thermoplastic Composite	Continuous and long fibers	18	50.94 x 50.86	3.15	12.61
SELFRAG	**CHP01**	Composite thermoplastic Chips pressed	Non-continuous and long fibers	9	50.19 x 49.9	3.02	11.83

Figure 4: SELFRAG LAB equipment used for the tests of WP 1 & 2.

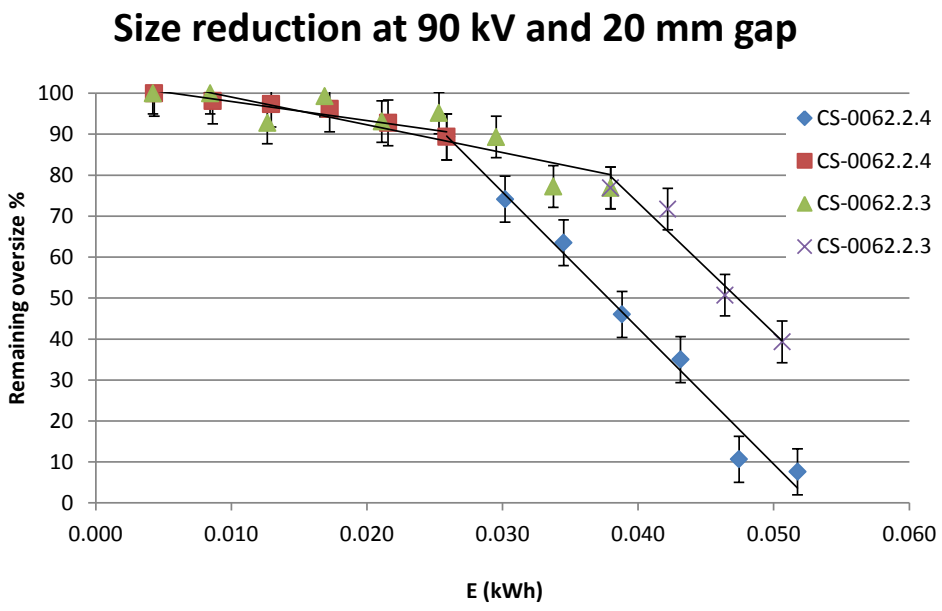

Figure 5 Typical size reduction pattern of CFRP in the process at different conditions – in this case different electrode sizes.

Figure 6: Size reduction of thermosets using high (left) and low (right) voltages at comparable energy input

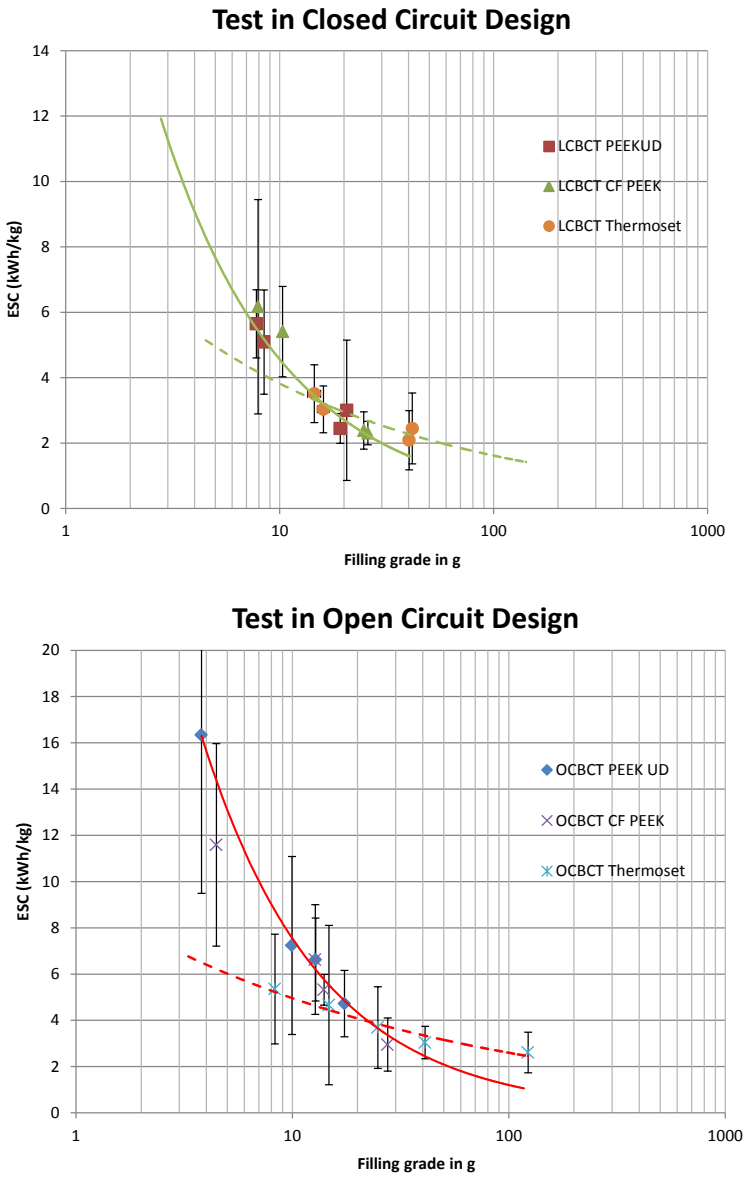

Figure 7: Tests in open and closed circuit design at different filling grades in g and CFRP material.

Figure 8: Door hinge processed with chopped tapes and electrodynamic recycled fragments. Pictures provided by M. Roux FHNW, Switzerland).

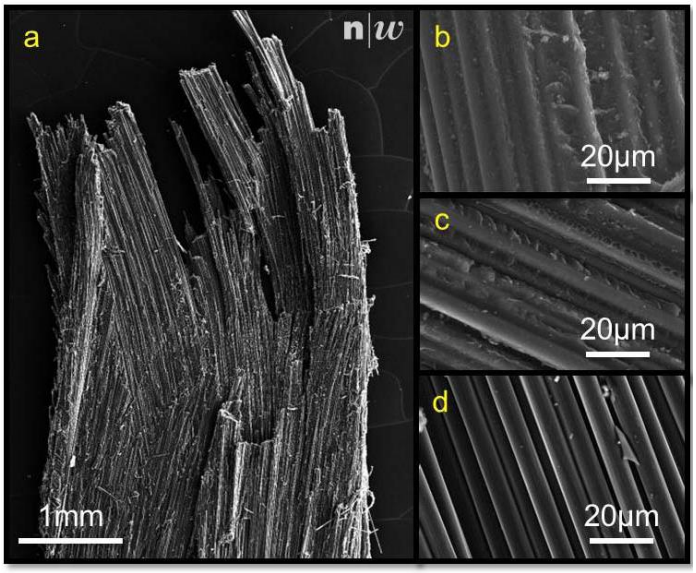

Figure 9 SEM pictures of a fragment after electrodynamic fragmentation (a), Fragment surfaces with fiber fully covered with thermoplastic polymer (b), partially covered by polymer (c) and free of polymer (d). (Roux 214)

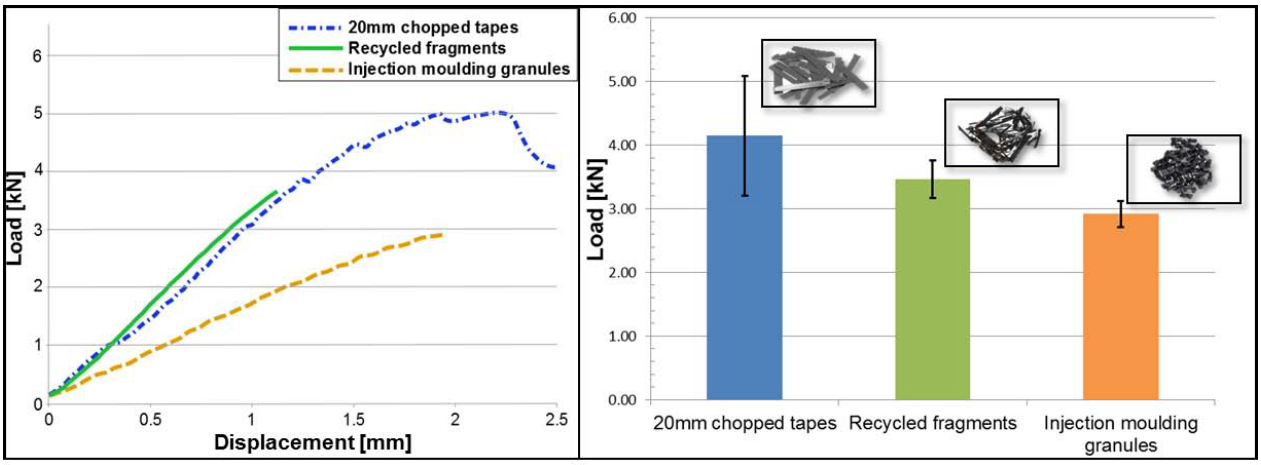

Figure 10: Left: typical load/deformation for the tested rotorcraft door hinges. Right: graphic of the maximal load of door hinges made with granules, recycled chips and chopped tapes (Roux 2014)

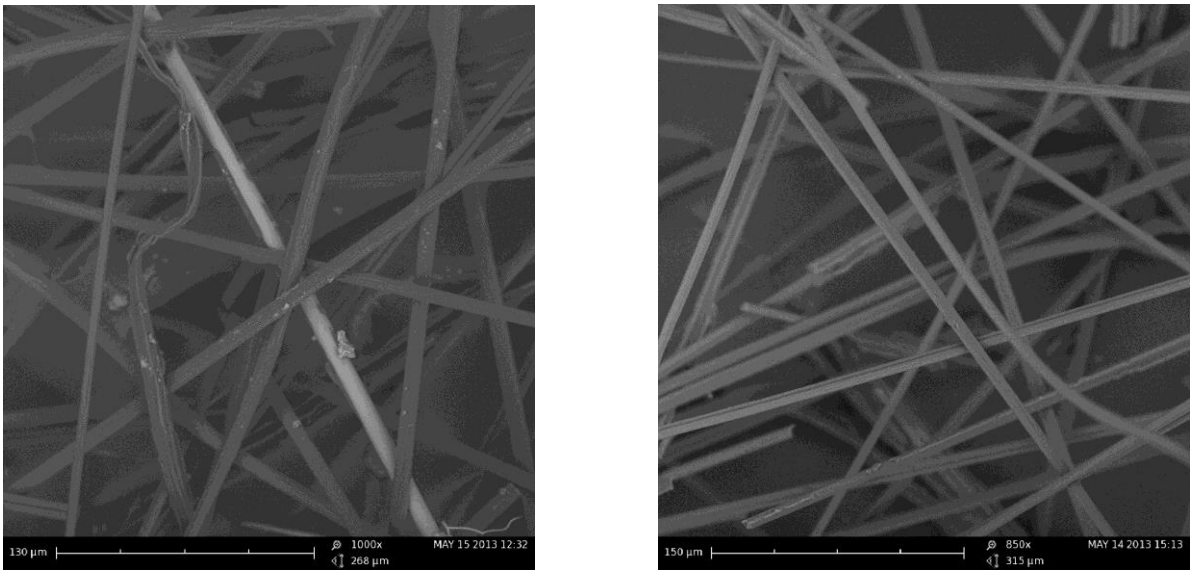

Figure 11: SEM pictures to C-fiber liberated by electrodynamic fragmentation (pictures provided byFraunhofer IBP).

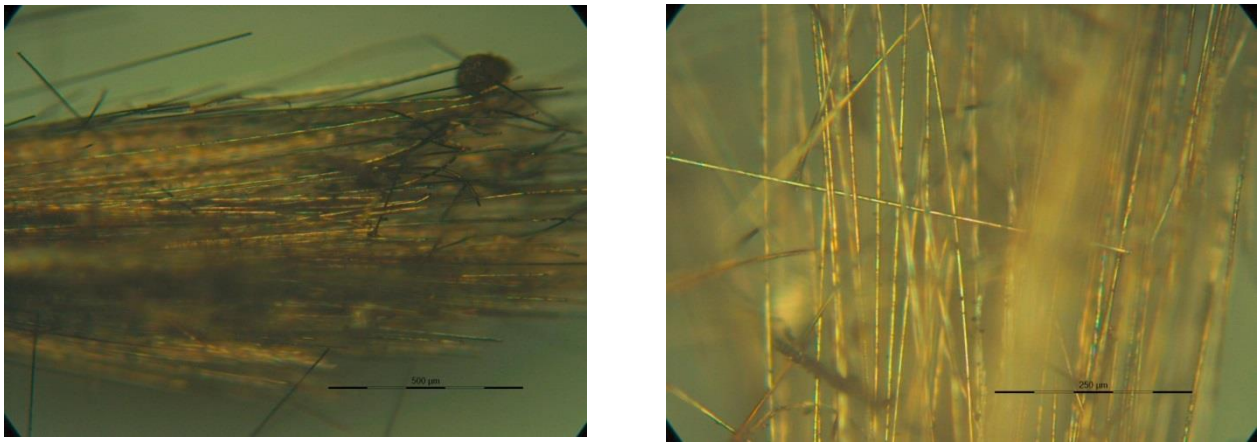

Figure 12: Micrographs to different magnification from C-fibers liberated from thermoset composites by electrodynamic fragmentation. Picture provided by M. Roux, FHNW, Switzerland.

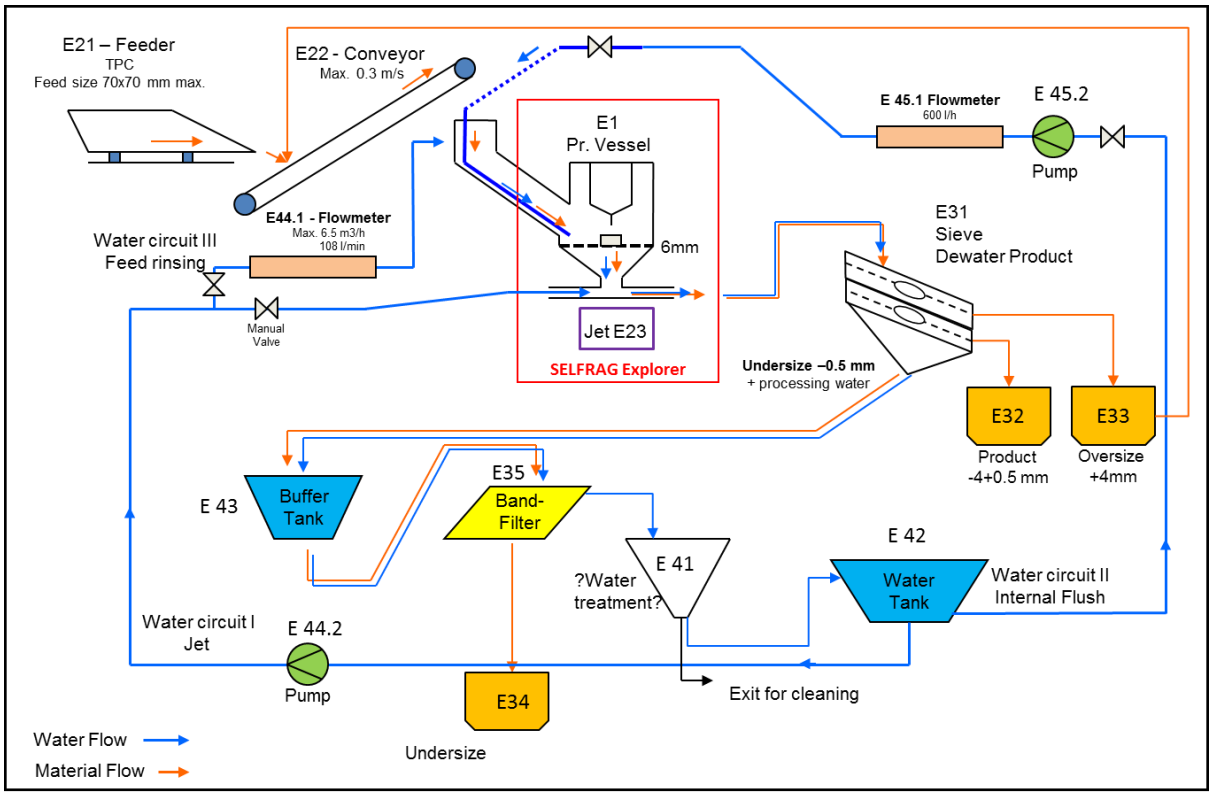

Figure 13: Conceptual flow-sheet of CFRP demonstrator in Plant E design to treat thermoplast PEEK and thermosets -60 mm.

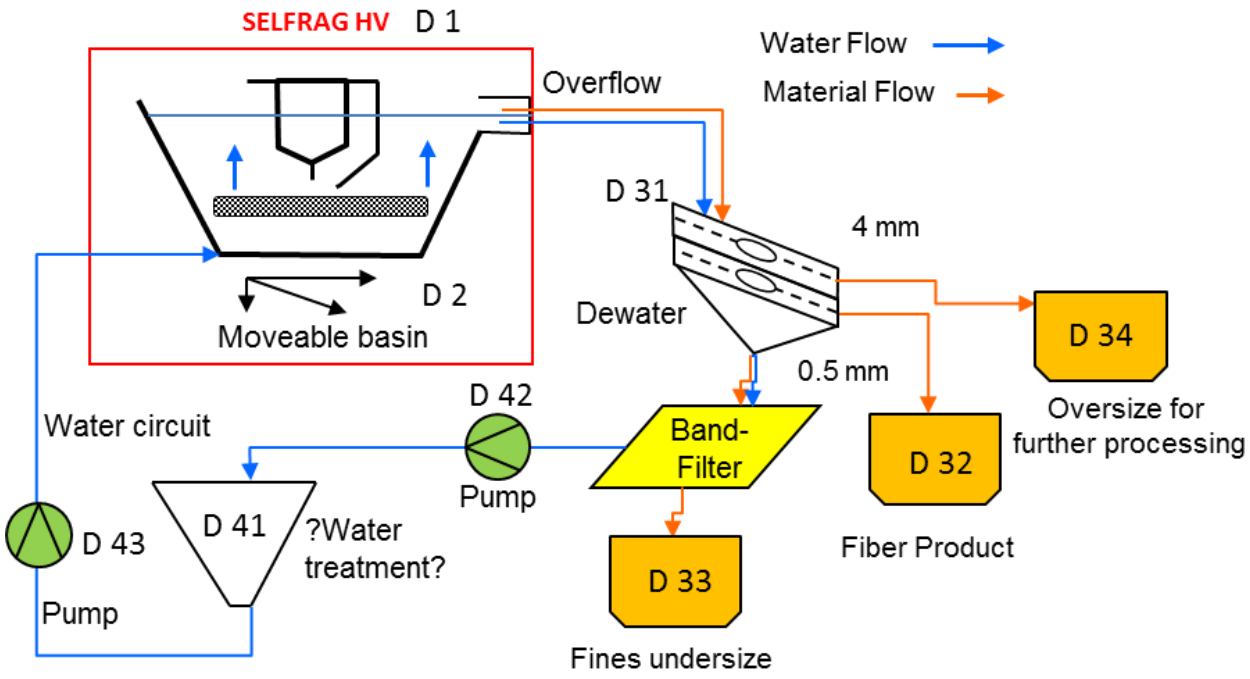

Figure 14: Flexible process zone and demonstrator circuit setup to treat larger shaped particle

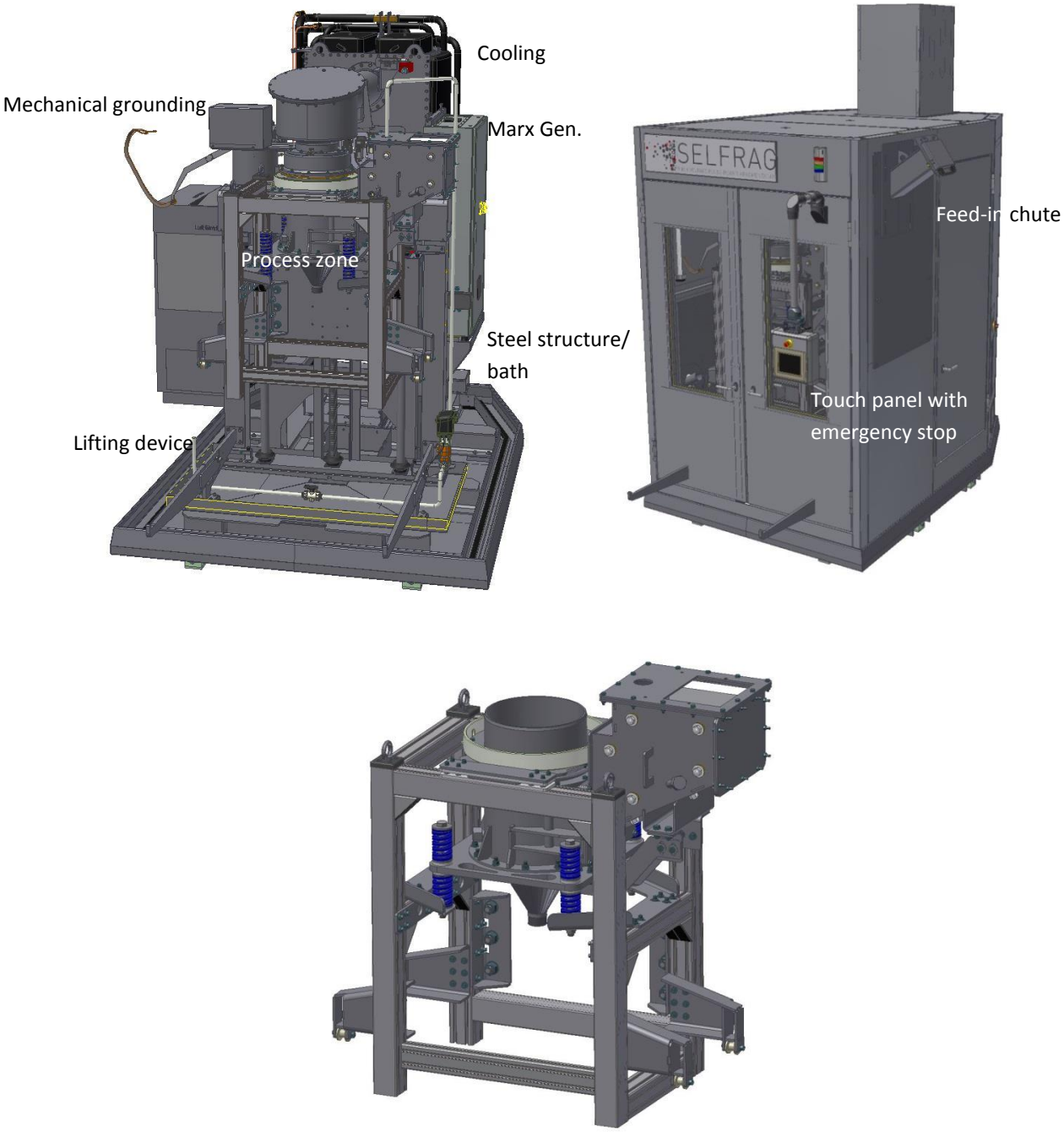

Figure 16&15: Construction of plant components including process zone.

Figure 17: Overview of actual SELFRAG plant and parts of post processing using a screen before filter fines. Oversize is collected in buckets.

Figure 16: Equipment setup for large CFRP material.

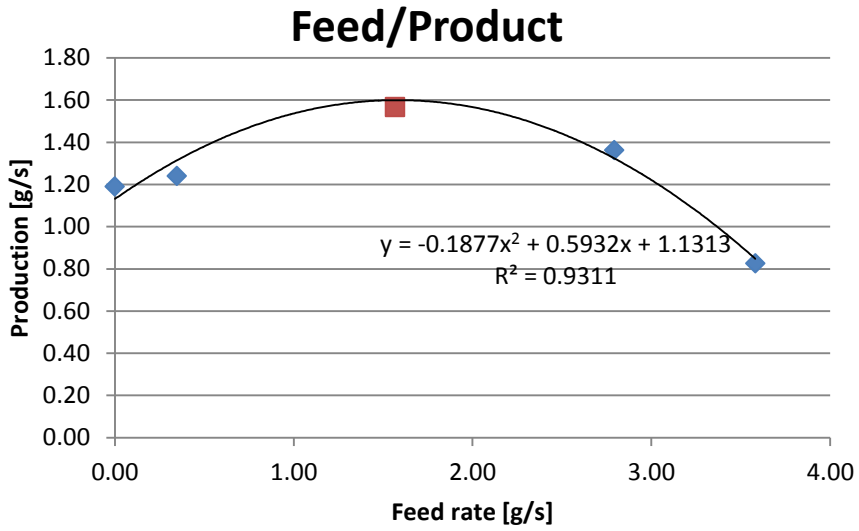

Figure 19: Feed/product correlation of optimization tests.