

Table 1: Technology Overview – Summary Technical Details

Technology Provider	Technology	Scale	Components treated	Location	Number of units	Applicability Ranking	Additional Remarks
TREDI - Séché	Autoclaving	F	PCB - TCB in various contaminated materials, mostly from electrical supply equipments	France	9	DA	Plant of St Vulbas Basis of the technical descriptions of the autoclaving process About 12 000 t / year
TREDI - Séché	Autoclaving	F	PCB - TCB in various contaminated materials, mostly from electrical supply equipments	France	2	DA	Plant of GEP (Générale d'Extraction du Pyralène) Although a bit different in concept, and smaller in size, the decontamination process is similar (heating and cooling under strong depression) About 1500 t / year
TREDI - Séché	Autoclaving	F	PCB - TCB in various contaminated materials, mostly from electrical supply equipments	Taiwan	1	DA	Similar to the apparatus of St Vulbas About 1500 t / year Activity finished in 2007
TREDI - Séché	Autoclaving	F	PCB - TCB in various contaminated materials, mostly from electrical supply equipments	Mexico	3	DA	Similar to the apparatus of GEP About 2000 t / year
TREDI - Séché	Autoclaving	F	PCB - TCB in various contaminated materials, mostly from electrical supply equipments	Argentina	1	DA	Mobile unit – has worked in various countries before. About 500 t / year

On each of those applications, everyday operation and analysis shows DRE of more than 99,998 %.

The exiting flows of matter (metallic materials and exhaust gas) are in conformity with the EU standards.

Table 2 : Some recent examples of decontaminations

Date of treatment	Manufacturer	Year of manufacturing	Total mass (kg)	Dielectric mass	Dielectric nature	Post – decontamination analysis	DRE
20 Dec. 04	Merlin Gerin N°745 614	1974	1775	570	Pyralen	Steel parts : 1 ppm Primary copper : 2 ppm Secondary copper : 4 ppm	99,9997 %
20 Dec 04	Transformer N° 102 147 d2	1974	860	246	Askarel	Steel parts : 1 ppm Primary copper : 1 ppm Secondary copper : 2 ppm	99,9997 %
6 Dec 04	TRANSFO N° 344 9302	1977	1220	340	Pyralen	Steel parts : 1 ppm Primary copper : 5 ppm Secondary copper : 14 ppm	99,9992 %
13 Dec 04	TRANSFIX N° 28700	1963	626	175	Pyralen	Steel parts : 1 ppm Primary copper : 8 ppm Secondary copper : 3 ppm	99,9996 %

Data measured at the companies own laboratory

Table 3 : Utilities required

Utility	Units	Quantity required per tonne of waste input	Quantity required per month (GEP - type autoclave)	Quantity required per month (St Vulbas type autoclave)
Electricity	MWh	584	24.3	65.7
Natural Gaz	MWh	649	27	73
Solvent (with recycling equipment)	kg	kg	550	1500
Cooling water	Closed loop - No real consumption			
Processing Rate	kg / min		0.95	2.8
	t / month		42	125
	t / yr		500	1500

Table 4 : Client References for Autoclaving

Organisation	Activity
ALSTOM	Supply of great scale electrical materials
EDF	French state compagny for electricity supplying - use of great, medium and small scale electrical materials
SNCF	French state compagny for railroad exploitation - use of a great variety of electrical materials
USINOR	Metallurgy - use of various size of transformers or condenser
PECHINEY	Industry of aluminium - use of big scale transformers and electrical materials
AVENTIS	Pharmacy - use of medium and small scale transformers
ORGAMOL	Pharmacy - use of medium and small scale transformers
CLARIANT	Chemical products manufacturer - use of medium and small scale transformers
ATOFINA	Fine chemistry - various sizes and natures of electrical materials