COST 526	"Automatic Process Optimization in Materials Technology" (APOMAT)	
Title of Proposal:	Optimization of sheet-metal blanking and bending-process. Application to the forming of High strength steel security parts.	
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	Work Packages	Coworker Months	**2001**				**2002**												**2003**												**2004**							
			9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8
W.P.1	**Material Characterization (ENSAM)**	4					x	x	x	X																												
WP 1.1	Hardening characterization	2					x	x																														
WP 1.2	Damage characterization	2							x	x																												
WP 2	**Industrial-parameters identification (ENSAM)**	4	x	x	x	x																																
WP 3	**Modeling (ENSAM+LASQUO)**							x	x	x	x	x	x	x	x	x	x	X																				
WP3.1	Blanking process (2D) LASQUO + ENSAM							x	x	x																												
WP3.2	Bending process (ENSAM)										x	x	x	x																								
WP.3.3	Blanking process (3D) (ENSAM)														x	X																						
WP3.4	Bending (3D) ENSAM																x	x																				
WP4	**Design of experiments (LASQUO + ENSAM)**											x	x	x	x	x	x	x																				
WP4.1	D.O.E. modeling based (LASQUO) for Blanking											x	x	x	x																							
W4.2P	D.O.E. modeling based (LASQUO) for Bending														x	x	x	x																				
W5	**Optimization**																		x	x	x	x	x	x	x	x	x	x										
W5.1	Design of objectives functions (ENSAM+LASQUO)																		x	x																		
W5.2	Developments of Gen. Algo. + Evol. Strategies (LASQUO)																				x	x	x	x	x	X												

W5.3	Gradient based methods (ENSAM+ LASQUO)																				x	x	x	x	x													
W5.4	Optimization loop of the processes (ENSAM+LASQUO)																								x	x	x	x	x	x								
W6	In-process (AFTG+ENSAM)																																					
W6.1	Inverse methods and in-process charcterization																								x	x	x	x	x	x								