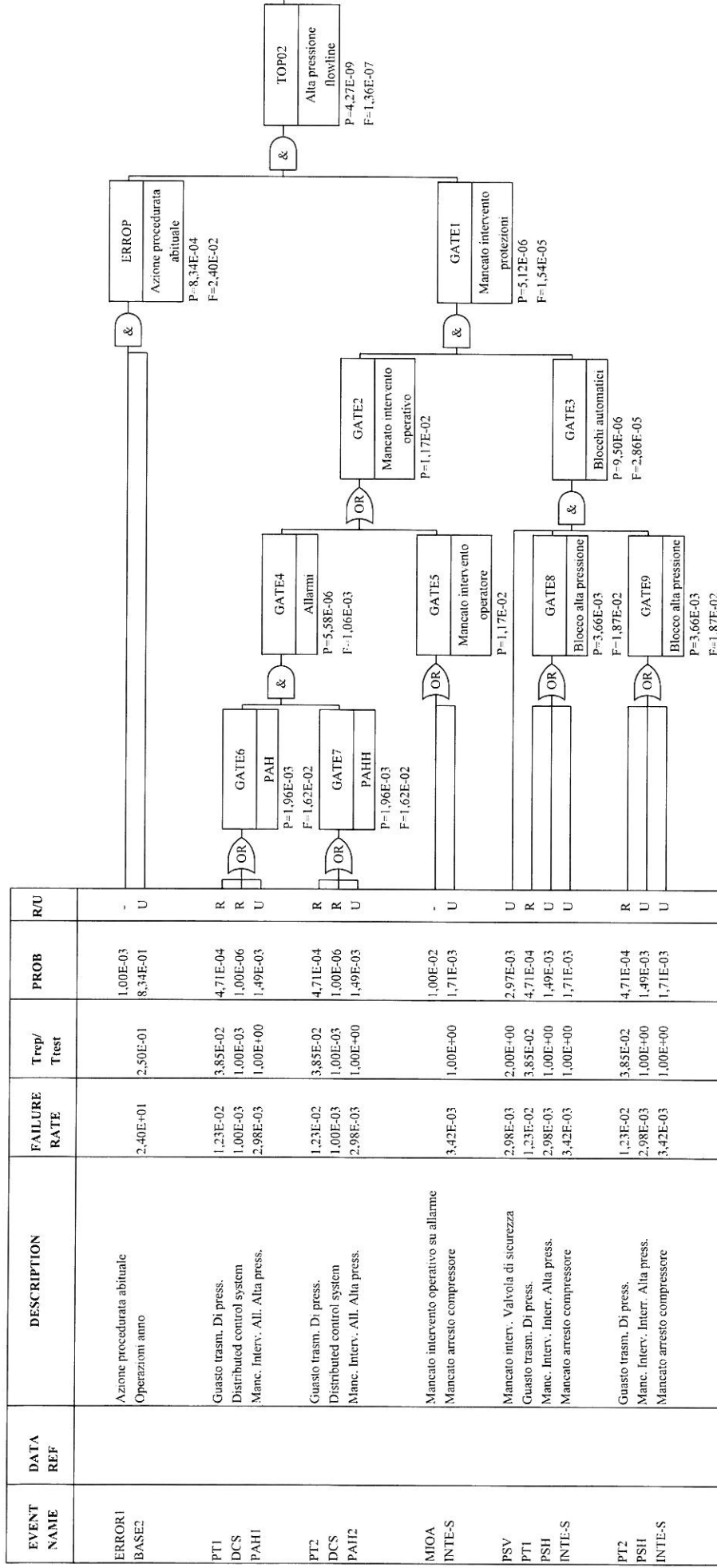


LOGAN Version 5.13 Serial No. 5111  
 Date (dd-mm-yy): 02-04-12 Time: 15.10.08  
 Fault Tree File : I:\PROGER\1203GA~2\ALLEGAT\NIC15~1.2\AL\LOGAN\TOP01  
 Cutset Order: 6  
 Proof Tests : Simultaneous

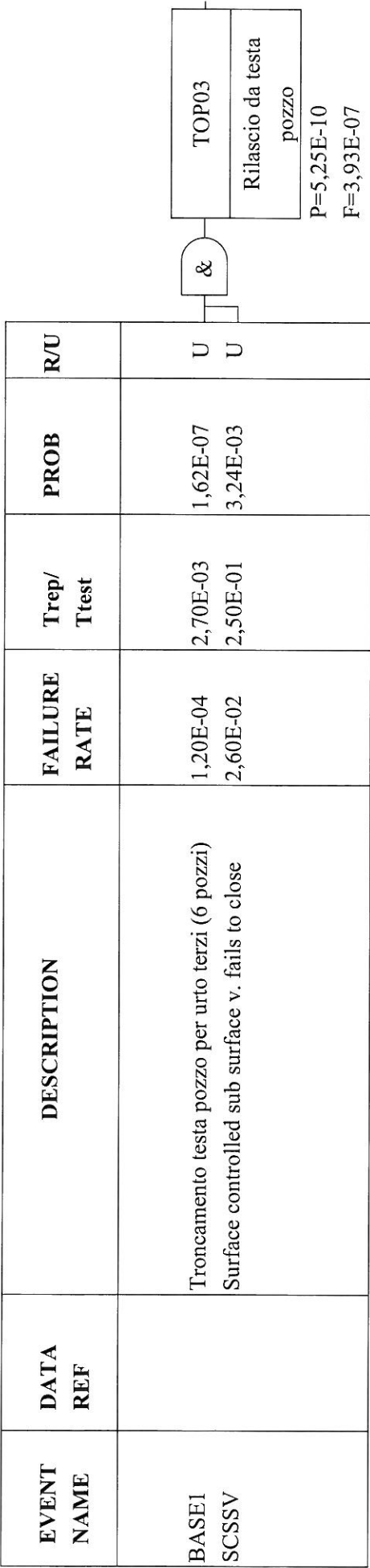
*Mauro Gotti*

FIGURE . FAULT TREE FOR RILASCIO DA FLOWLINE PER ROTTURA FRAGILE



LOGAN Version 5.13 - Serial No. 5111  
Date (dd-mm-yy): 02-04-12 Time: 17.39.49  
Fault Tree File : I:\PROGER\203GA-2\ALLEGATI\CI15-1.2\ALU\LOGAN\TOP02  
Cusnet Order: 6  
Proof Tests : Simultaneous

FIGURE . FAULT TREE FOR ALTA PRESSIONE FLOWLINE



LOGAN Version 5.13    Serial No. 5111  
 Date (dd-mm-yy):    02-04-12    Time: 12.16.59  
 Fault Tree File :    I:\PROGER\1203GA~2\ALLEGATI\IC15~1.2AL\LOGAN\TOP03  
 Cutset Order:    6  
 Proof Tests :    Simultaneous

FIGURE . FAULT TREE FOR RILASCIO DA TESTA POZZO

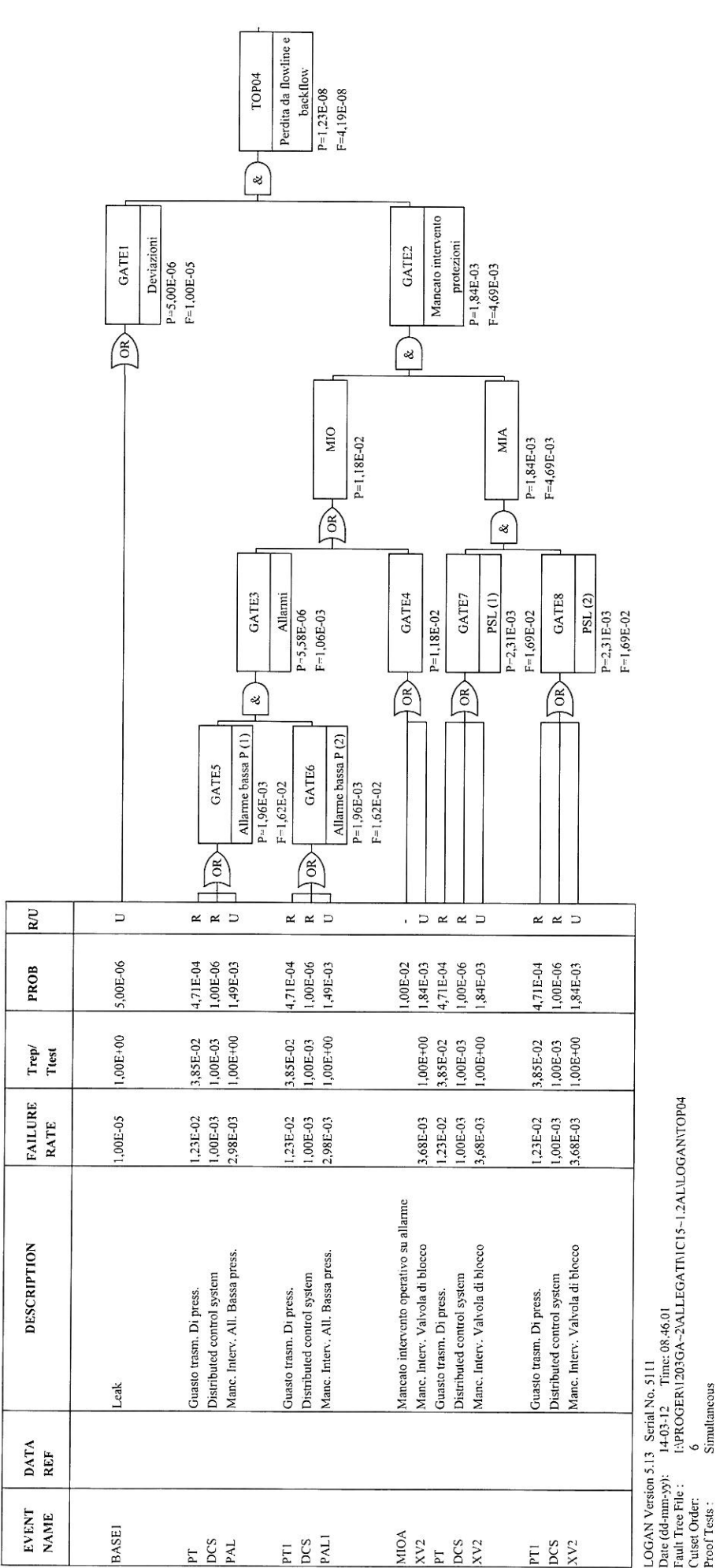
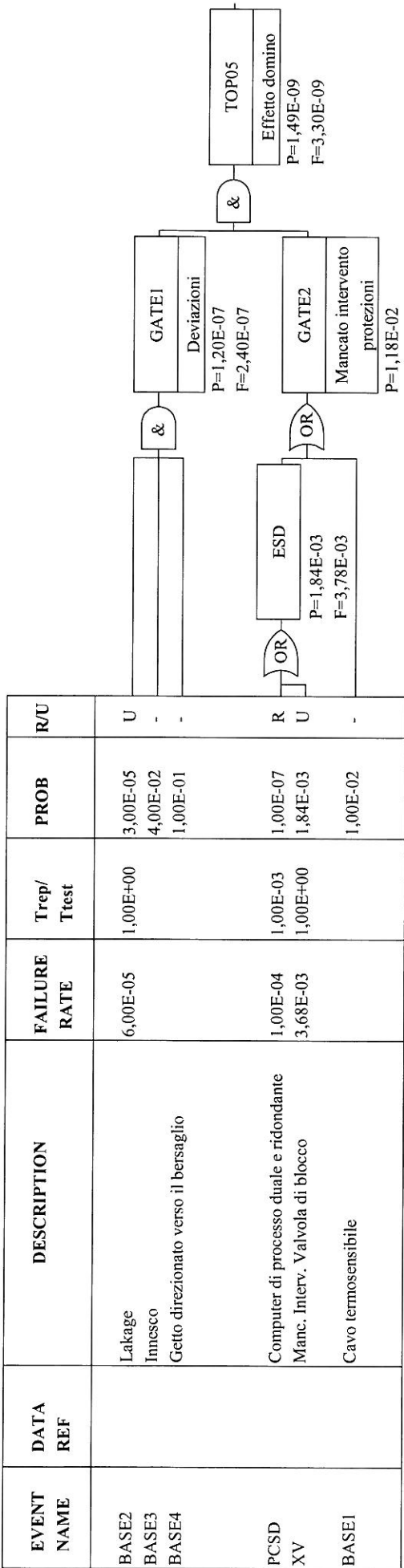


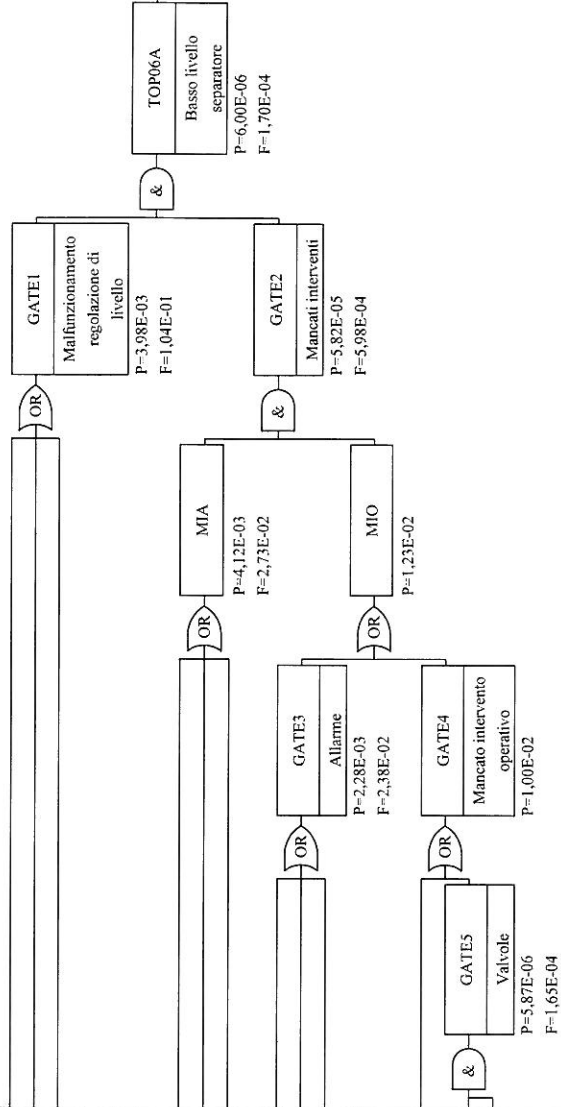
FIGURE . FAULT TREE FOR PERDITA DA FLOWLINE E BACKFLOW



LOGAN Version 5.13    Serial No. 5111  
 Date (dd-mm-yy): 14-03-12    Time: 10.26.00  
 Fault Tree File : I:\PROGER\1203GA~2\ALLEGATI\IC15~1.2AL\LOGAN\TOP05  
 Cutset Order: 6  
 Proof Tests : Simultaneous

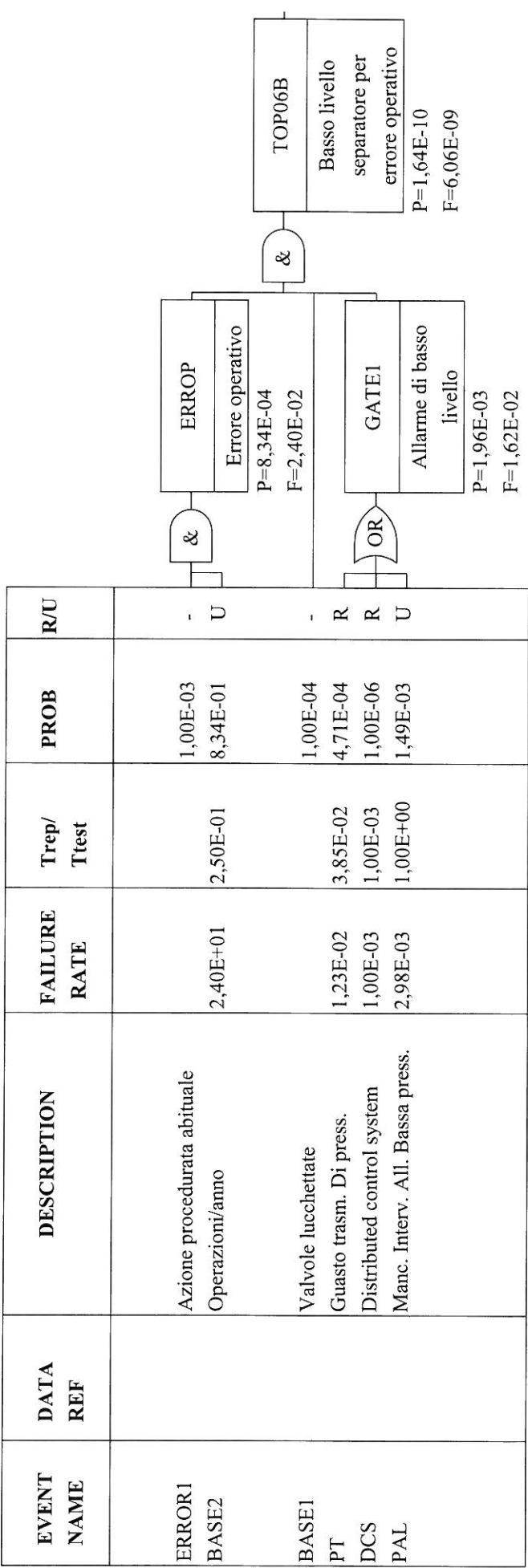
FIGURE . FAULT TREE FOR EFFETTO DOMINO

EVENT NAME	DATA REF	DESCRIPTION	FAILURE RATE	Trep/ Ttest	PROB	R/U
LT		Guasto trasm. Di liv.	2,07E-02	3,85E-02	7,95E-04	R
PCSD		Computer di processo duale e ridondante	1,00E-04	1,00E-03	1,00E-07	R
LV		Valvola di regolazione portata	8,32E-02	3,85E-02	3,19E-03	R
LT2		Guasto trasm. Di liv.	2,07E-02	3,85E-02	7,95E-04	R
LSL		Manc. Interv. Interr. Basso liv.	2,98E-03	1,00E+00	1,49E-03	U
XV		Manc. Interv. Valvola di blocco	3,68E-03	1,00E+00	1,84E-03	U
LT3		Guasto trasm. Di liv.	2,07E-02	3,85E-02	7,95E-04	R
PCSD		Computer di processo duale e ridondante	1,00E-04	1,00E-03	1,00E-07	R
LAL		Manc. Interv. All. Basso liv.	2,98E-03	1,00E+00	1,49E-03	U
MIOA		Mancato intervento operativo su allarme			1,00E-02	-
LV		Valvola di regolazione portata	8,32E-02	3,85E-02	3,19E-03	R
XV		Manc. Interv. Valvola di blocco	3,68E-03	1,00E+00	1,84E-03	U



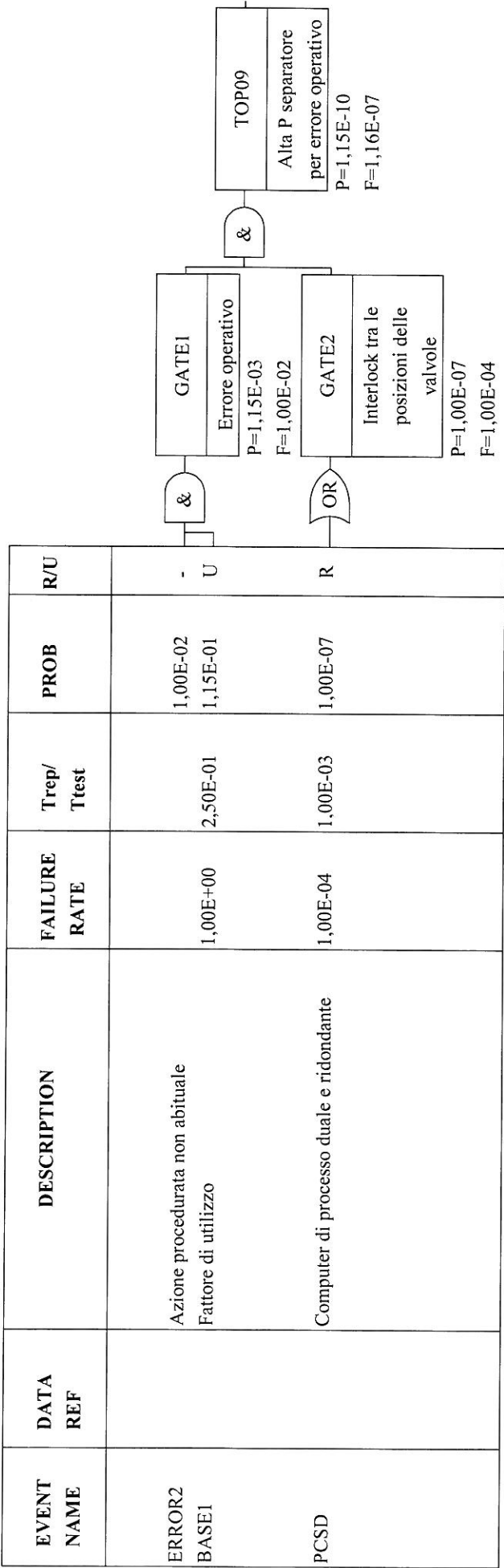
LOGAN Version 5.13 Serial No. 5111  
Date (dd-mm-yy): 14-03-12 Time: 08.46.34  
Fault Tree File : I:\PROGER\1203GA-2VAL1\FGATT\TC15-1.2AL\LOGANTOP06A  
Cusset Order: 6  
Proof Tests : Simultaneous

FIGURE . FAULT TREE FOR BASSO LIVELLO SEPARATORE



LOGAN Version 5.13    Serial No. 5111  
 Date (dd-mm-yy):    02-04-12    Time: 15.14.55  
 Fault Tree File :    I:\PROGER\1203GA~2\ALLEGATI\IC15-1.2A\LOGANTOP06B  
 Cutset Order:    6  
 Proof Tests :    Simultaneous

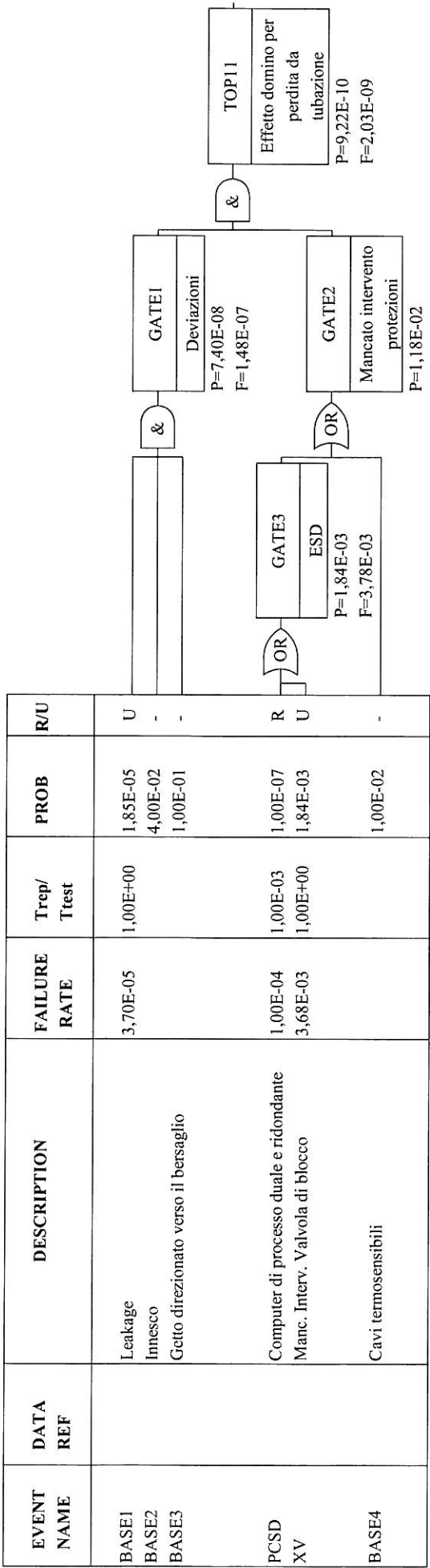
FIGURE . FAULT TREE FOR BASSO LIVELLO SEPARATORE PER ERRORE OPERATIVO



LOGAN Version 5.13    Serial No. 5111  
 Date (dd-mm-yy): 14-03-12    Time: 08.47.04  
 Fault Tree File : I:\PROGER\1203GA~2\ALLEGATTI\IC15~1.2\ALLOGAN\TOP09  
 Cutset Order: 6  
 Proof Tests : Simultaneous

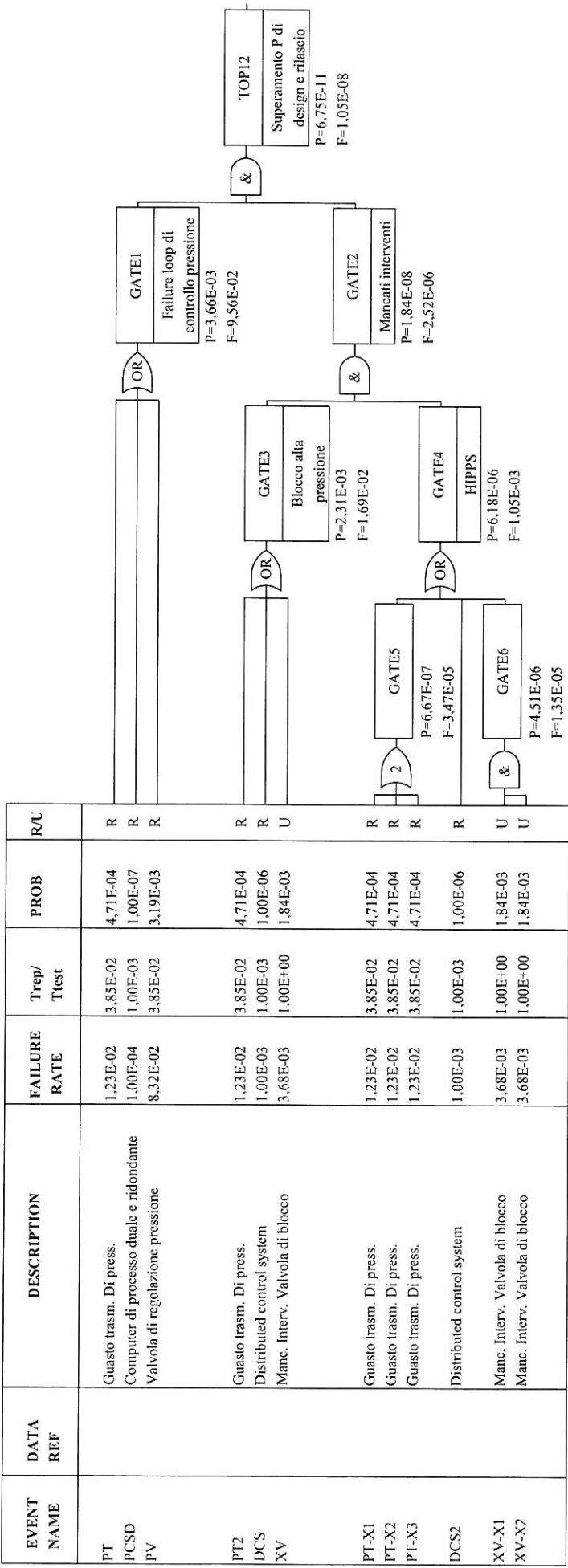
FIGURE . FAULT TREE FOR ALTA P SEPARATORE PER ERRORE OPERATIVO





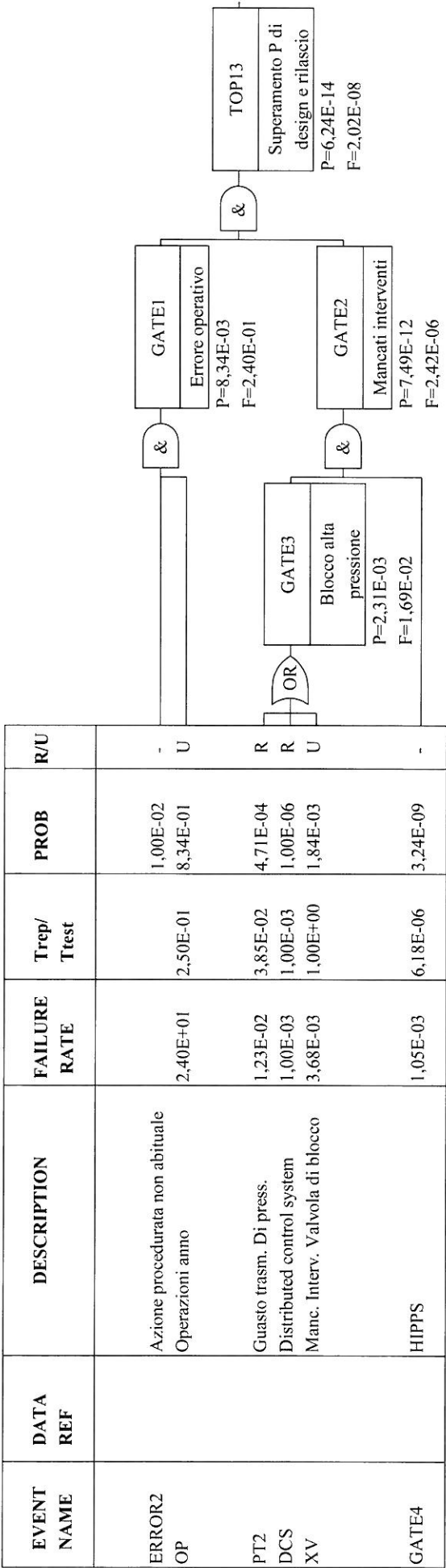
LOGAN Version 5.13 Serial No. 5111  
 Date (dd-mm-yy): 14-03-12 Time: 10.33.34  
 Fault Tree File : I:\PROGER\1203GA~2\ALLEGATI\IC15~1.2\AL\LOGAN\TOP11  
 Cutset Order: 6  
 Proof Tests : Simultaneous

FIGURE . FAULT TREE FOR EFFETTO DOMINO PER PERDITA DA TUBAZIONE



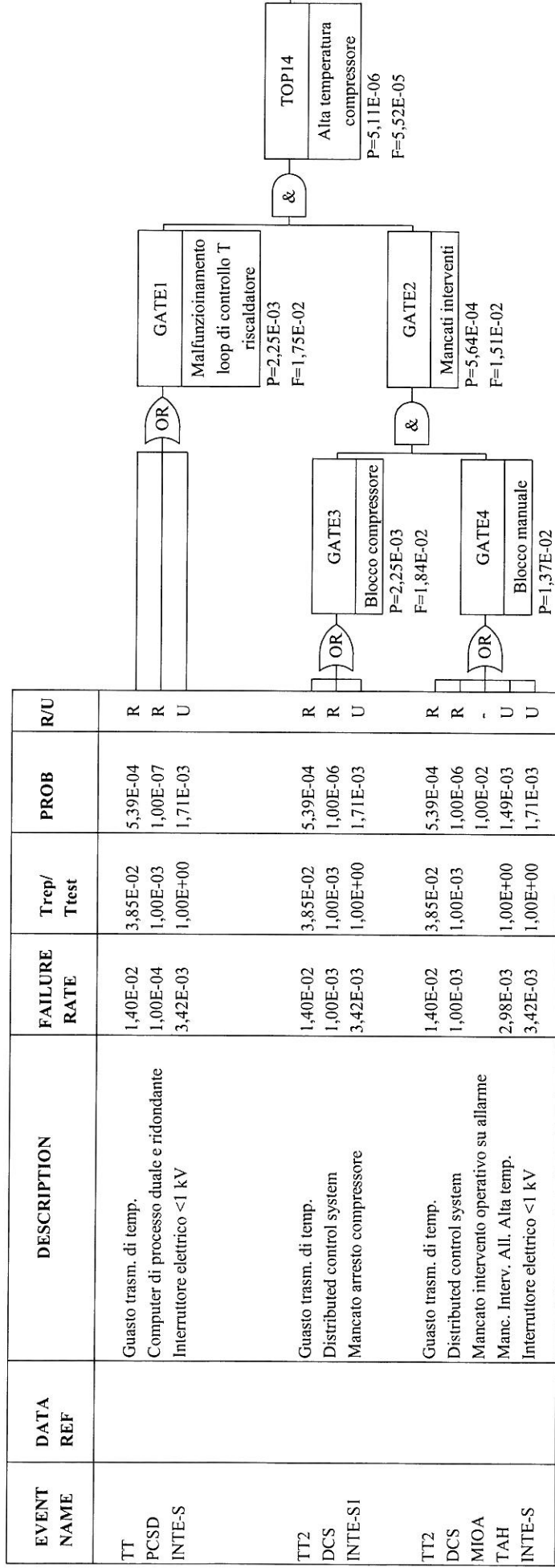
LOGAN Version 5.13 - Serial No. 5111  
 Date (dd-mm-yy): 14-03-12 Time: 08:47:31  
 Fault Tree File : I:\PROGER\1203GA~2\ALLEGATI\CI5~1.2\ALLOGANTOP12  
 Cutset Order: 6  
 Proof Tests : Simultaneous

FIGURE . FAULT TREE FOR SUPERAMENTO P DI DESIGN E RILASCIO



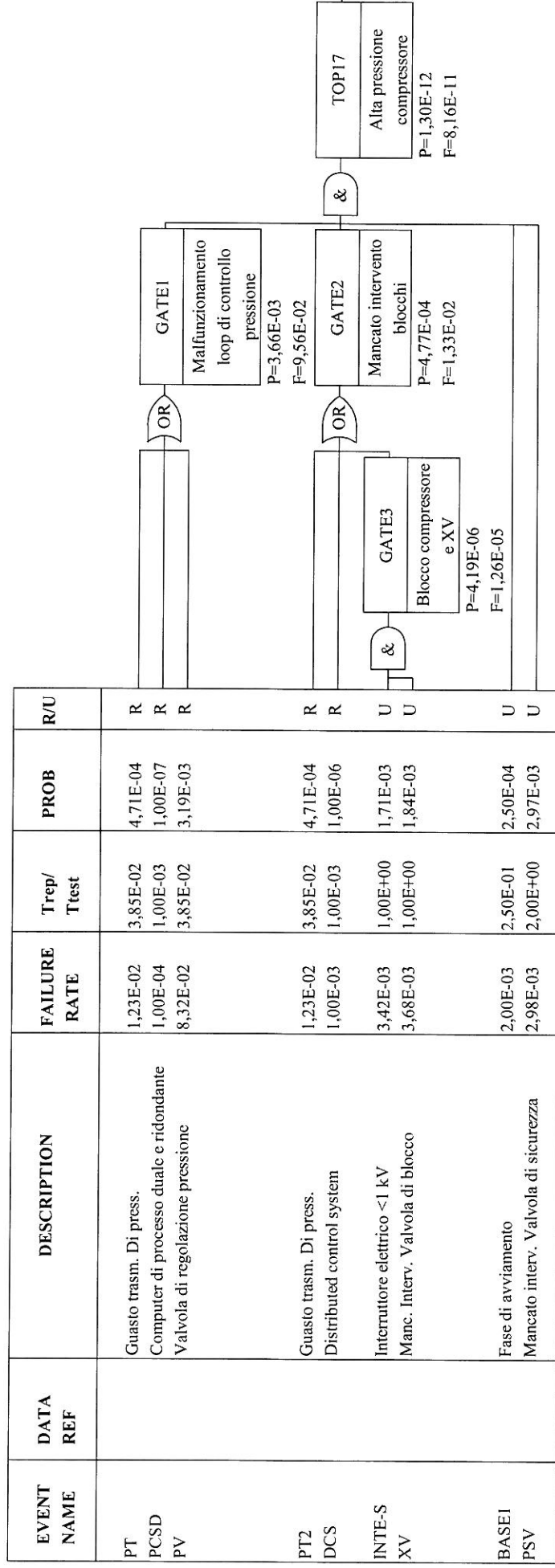
LOGAN Version 5.13 Serial No. 5111  
 Date (dd-mm-yy): 02-04-12 Time: 15.15.57  
 Fault Tree File: I:\PROGER\1203GA~2\ALLEGAT\NIC15~1.2\ALLOGAN\TOP13  
 Cutset Order: 6  
 Proof Tests: Simultaneous

FIGURE . FAULT TREE FOR SUPERAMENTO P DI DESIGN E RILASCIO



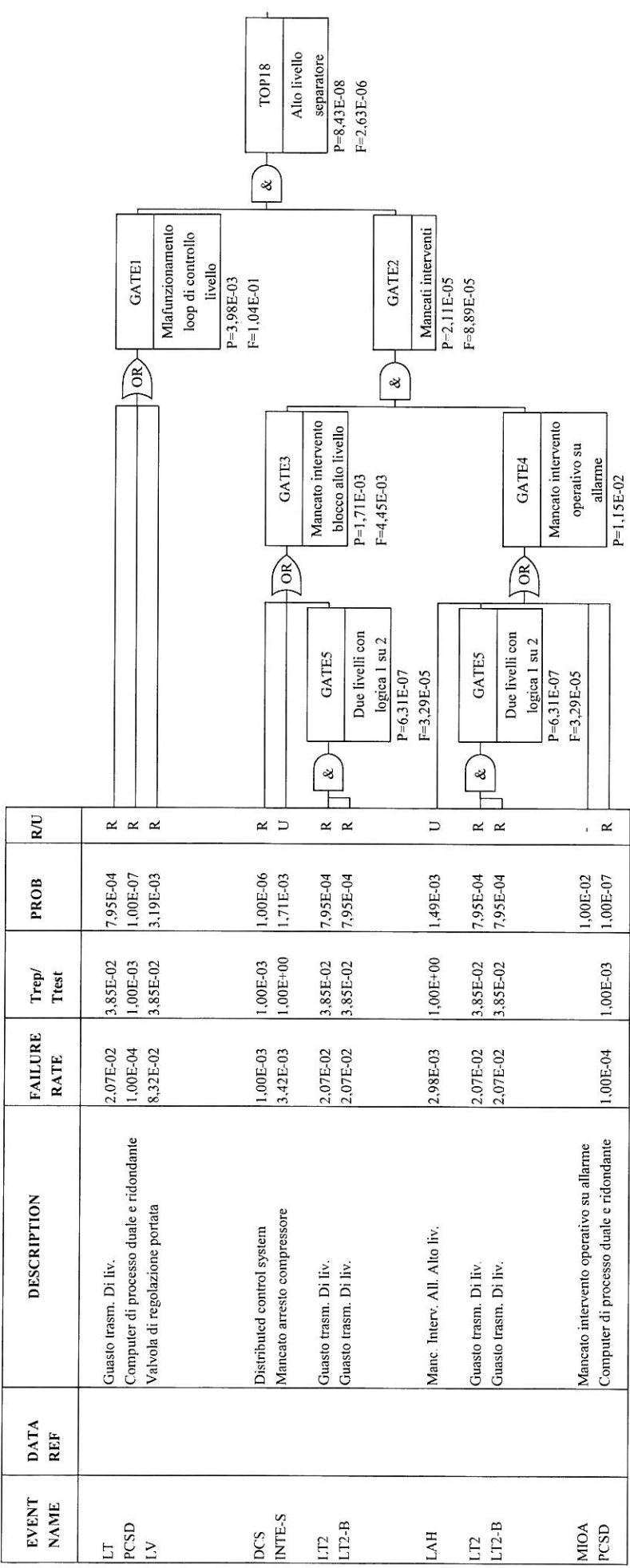
LOGAN Version 5.13 Serial No. 5111  
 Date (dd-mm-yy): 14-03-12 Time: 08.48.08  
 Fault Tree File : I:\PROGER\1203GA~2\ALLEGATI\CI5~1.2A\LOGAN\TOP14  
 Cutset Order: 6  
 Proof Tests : Simultaneous

FIGURE . FAULT TREE FOR ALTA TEMPERATURA COMPRESSORE



LOGAN Version 5.13 Serial No. 5111  
 Date (dd-mm-yy): 14-03-12 Time: 08.48.22  
 Fault Tree File : I:\PROGER\1203GA~2\ALLEGATI\CI15~1.2A\LOGAN\TOP17  
 Culset Order: 6  
 Proof Tests : Simultaneous

FIGURE . FAULT TREE FOR ALTA PRESSIONE COMPRESSORE



LOGAN Version 5.13 Serial No. 5111  
Date (dd-mm-yy): 14-03-12 Time: 08.56.12  
Fault Tree File: I:\PROGER\1203GA-2\ALLEGATTI\CI5-1.2A\LOGAN\TOP18  
Cusel Order: 6  
Proof Tests: Simultaneous

FIGURE . FAULT TREE FOR ALTO LIVELLO SEPARATORE

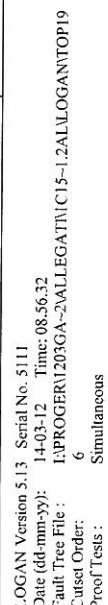
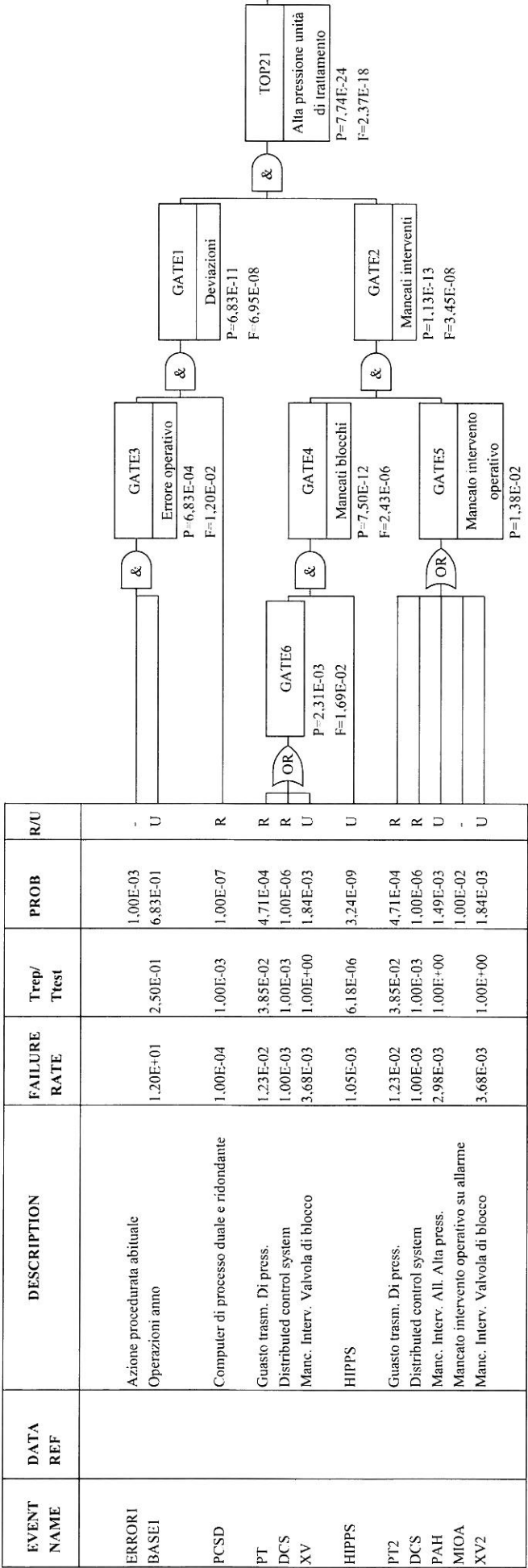


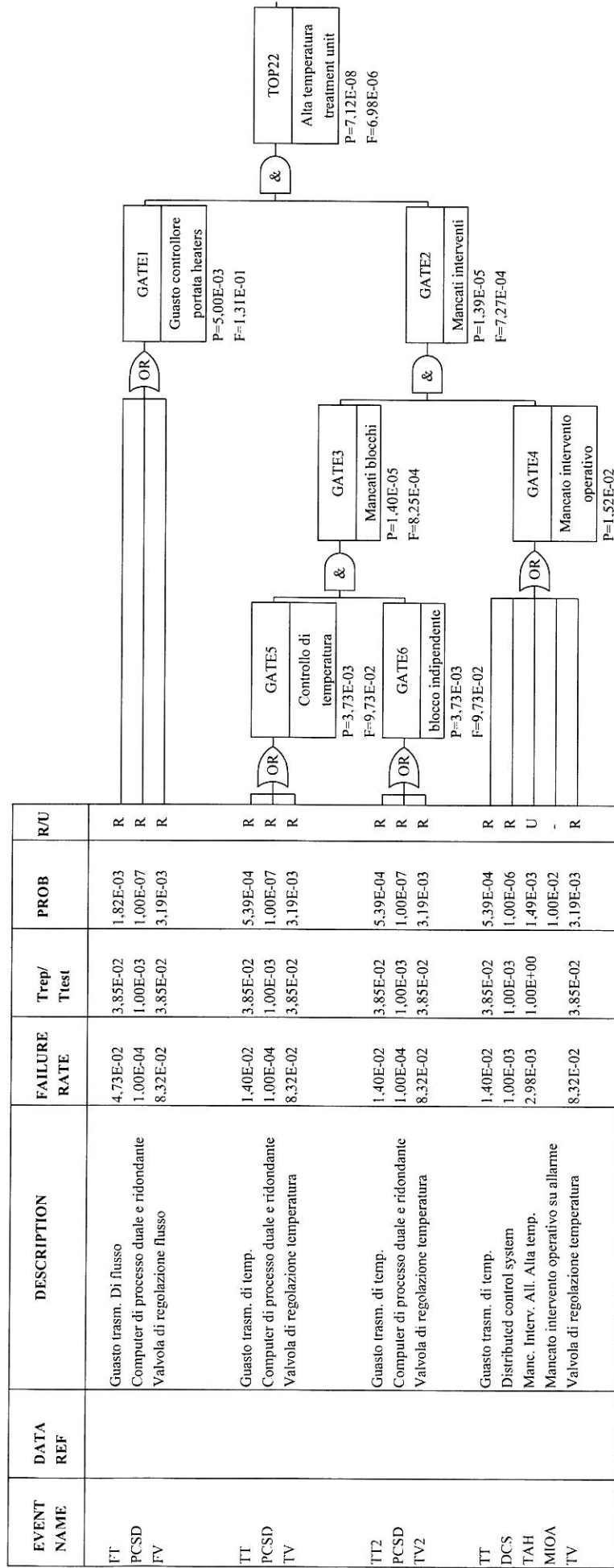
FIGURE. FAULT TREE FOR BASSO LIVELLO SEPARATORE



LOGAN Version 5.13 Serial No. 5111  
 Date (dd-mm-yy): 02-04-12 Time: 15.35.46  
 Fault Tree File : I:\PROGER\1203GA-2\ALLEGAT\MIC15-1.2A\LOGAN\TOP21  
 Cutset Order: 6  
 Proof Tests : Simultaneous

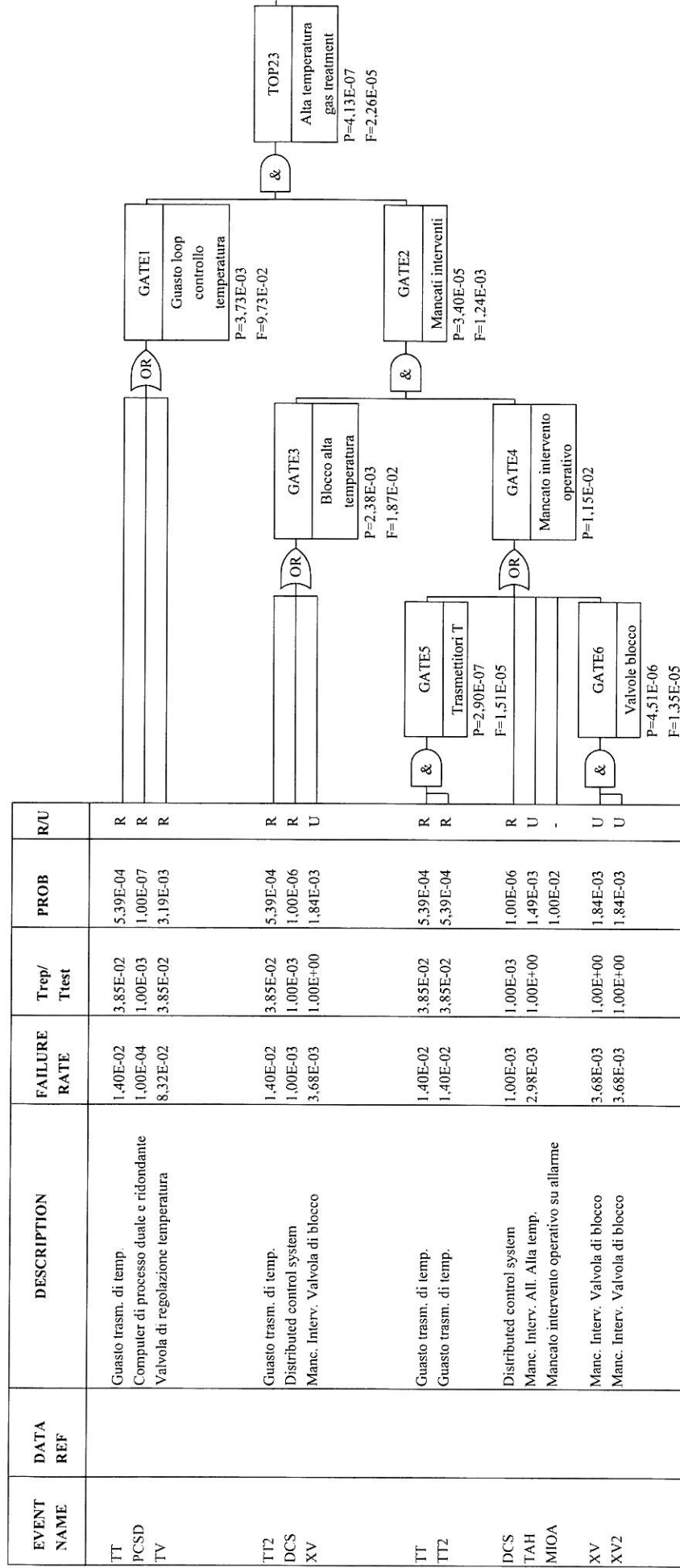
FIGURE . FAULT TREE FOR ALTA PRESSIONE UNITÀ DI TRATTAMENTO





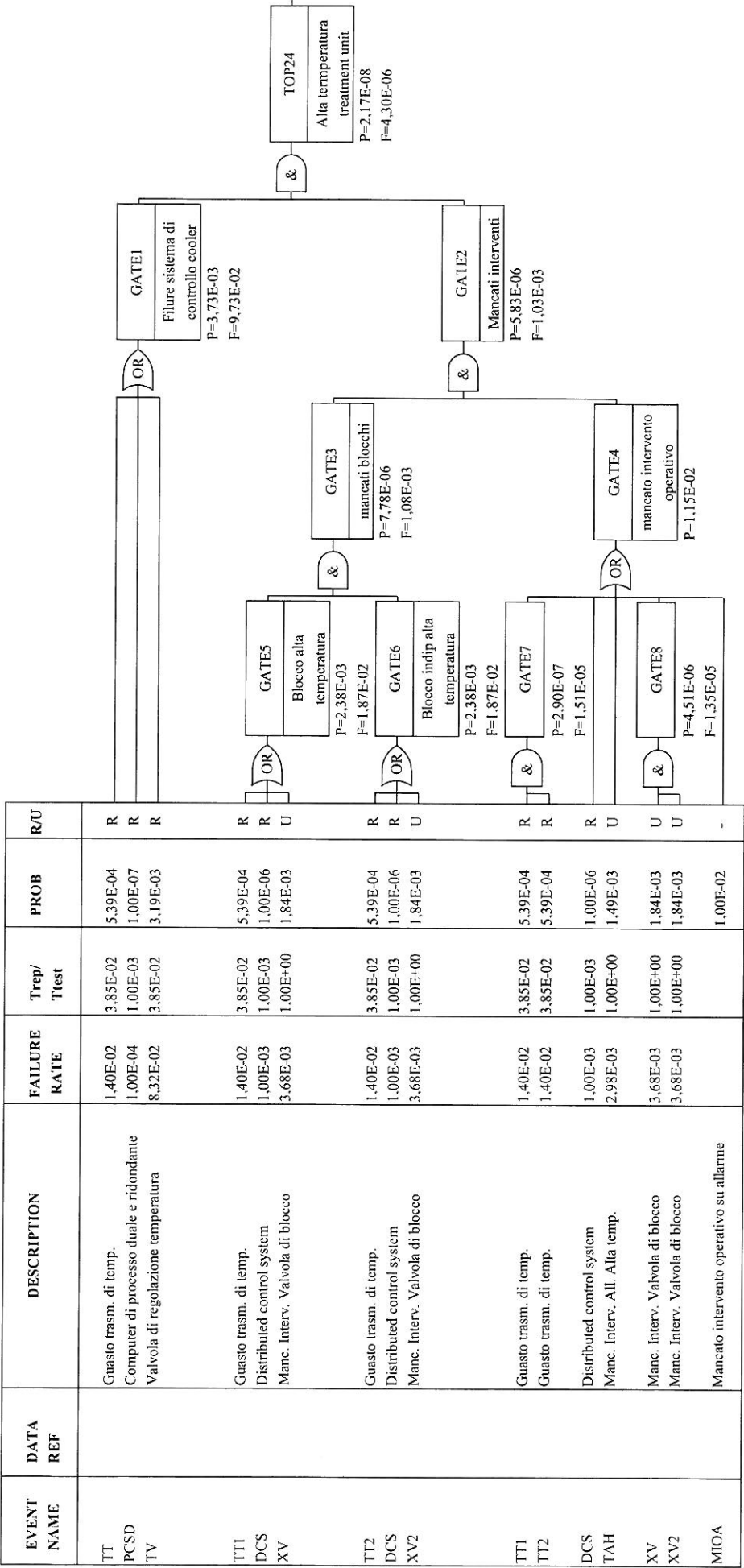
LOGAN Version 5.13 Serial No. 5111  
 Date (dd-mm-yy): 14-03-12 Time: 08:57:21  
 Fault Tree File: I:\PROGER\203GA-2\ALLEGATI\C15-1.2\ALLOGANTOP22  
 Cutset Order: 6  
 Proof Tests: Simultaneous

FIGURE . FAULT TREE FOR ALTA TEMPERATURA TREATMENT UNIT



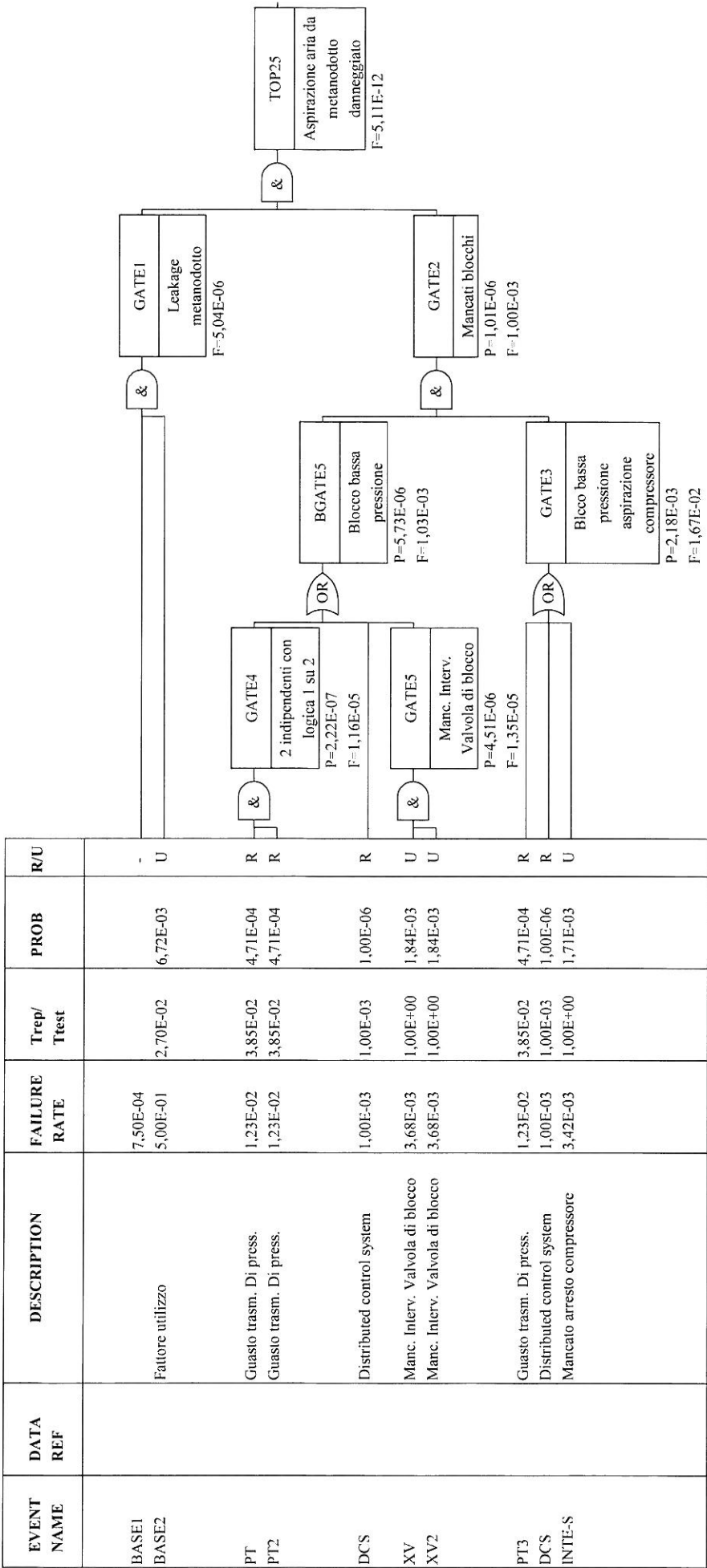
LOGAN Version 5.13 Serial No. 5111  
Date (dd-mm-yy): 14-03-12 Time: 08.57.41  
Fault Tree File : I:\PROGER\1203GA-2\ALLEGATTI\CI15-1.2A\LOGANTOP23  
Cuiset Order: 6  
Proof Tests : Simultaneous

FIGURE . FAULT TREE FOR ALTA TEMPERATURA GAS TREATMENT



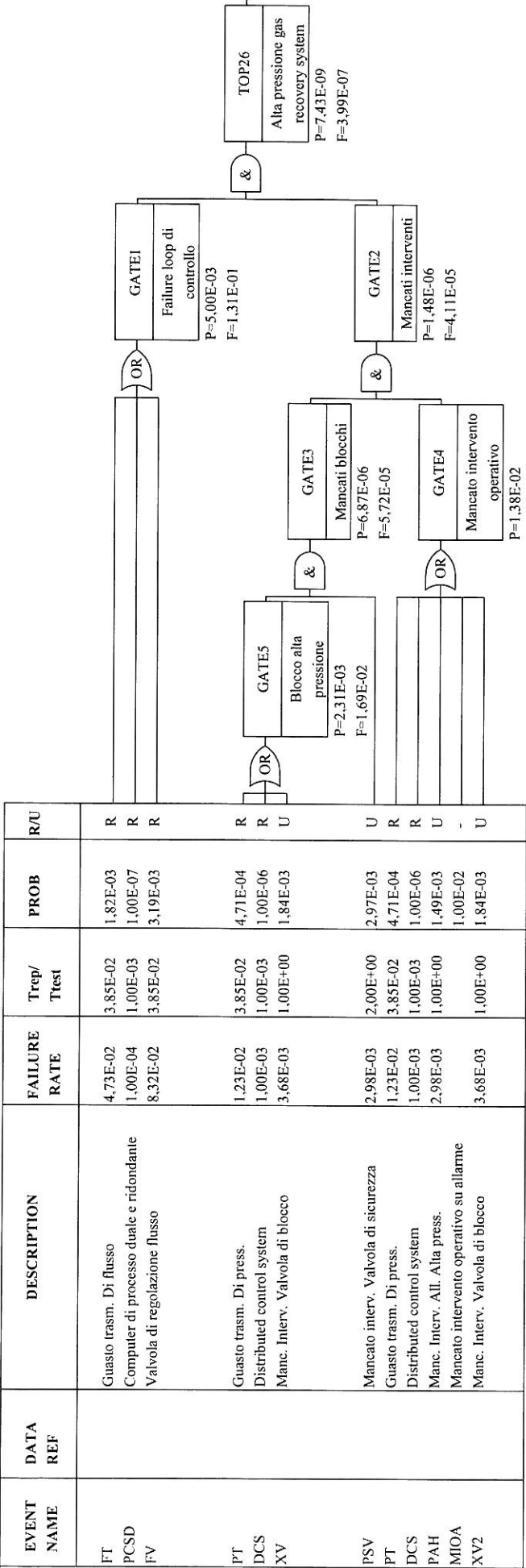
LOGAN Version 5.13 Serial No. 5111  
 Date (dd-mm-yy): 14-03-12 Time: 08.57.54  
 Fault Tree File : I:\PROGER\1203GA-2\ALLEGAT\IC15-1.2\AL\LOGAN\TOP24  
 Cusset Order: 6  
 Proof Tests : Simultaneous

FIGURE . FAULT TREE FOR ALTA TERMPERATURA TREATMENT UNIT



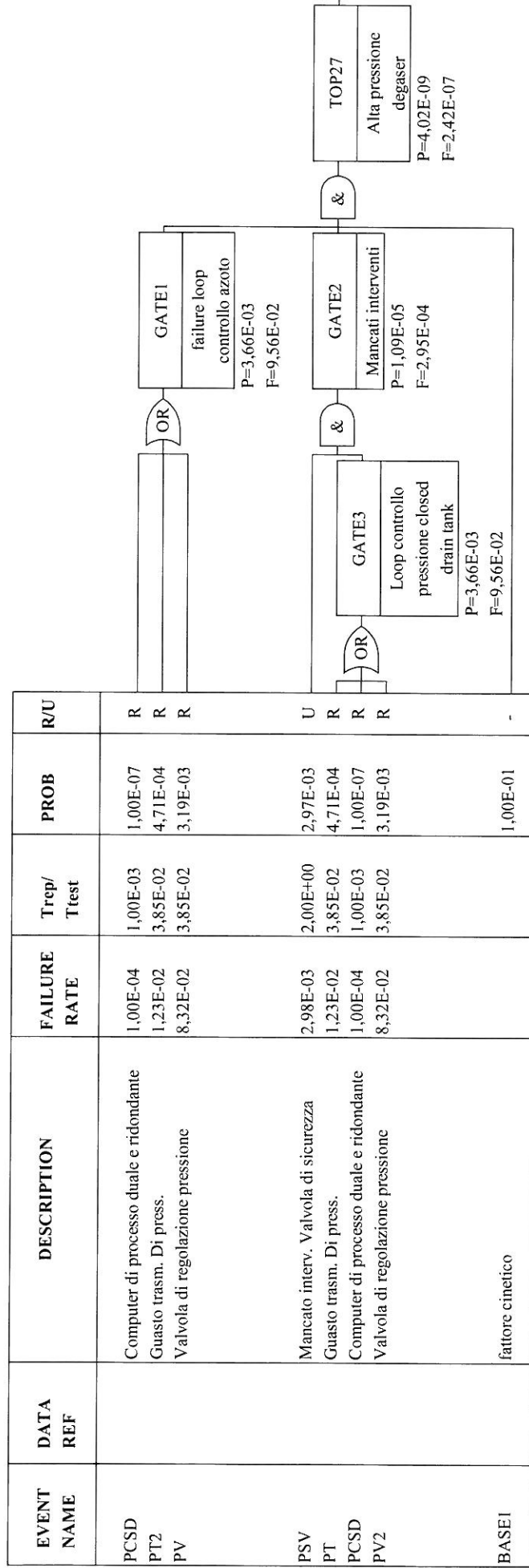
LOGAN Version 5.13 - Serial No. 5111  
 Date (dd-mm-yy): 02-04-12 Time: 12.42.50  
 Fault Tree File : I:\PROGER\1203GA-2\ALLEGATTI\IC15-1.2\ALLOGANTOP25  
 Cutset Order: 6  
 Proof Tests : Simultaneous

FIGURE . FAULT TREE FOR ASPIRAZIONE ARIA DA METANODOTTO DANNEGGIATO



LOGAN Version 5.13 Serial No. 5111  
Date (dd-mm-yy): 14-03-12 Time: 09.44.34  
Fault Tree File: I:\PROGER\1203GA-2\ALLEGATI\CI15~1.2\ALLOGAN\TOP26  
Cusset Order: 6  
Proof Tests: Simultaneous

FIGURE . FAULT TREE FOR ALTA PRESSIONE GAS RECOVERY SYSTEM



LOGAN Version 5.13 Serial No. 5111  
 Date (dd-mm-yy): 02-04-12 Time: 15.58.41  
 Fault Tree File : I:\PROGER\1203GA~2\ALLEGATI\IC15~1.2A\LOGAN\TOP27  
 Cutset Order: 6  
 Proof Tests : Simultaneous

**FIGURE . FAULT TREE FOR ALTA PRESSIONE DEGASER**