

TF-IDF Results for PPU Atomic Solution Space Sets			
R	1-2-3-4a-4b-5-7-8-9-10-11-12-13	2-3-4a-4b-5-7-8-9-10-11-12-13	1-2-3-4a-4b-5-7-8-9-10-11-12
1	initcompleted	wptypemetallic	unset
2	gvlissfcresetting	inductivesensordiwpmetallic	motor
3	sfcreset	metallic	microswitch
4	stopcrane	inductivesensor	inductiveswitch
5	tableatstackdiswitchtrue	wpready	atramp
6	emergencyhandled	wpprovided	atstackind
7	tableatstackinddiinductiveswitch	opticalsensordiwpflight	atstack
8	tableatrampinddiinductiveswitch	wptypeblack	atrampind
9	tableatrampdiswitchtrue	mainstackwptypemetallic	atconveyor
10	emergencystop	mainstackwptypeblack	turningtable
R	10-11-12-13-4a-4b-7-8-9	10-11-12-13-5-7-8-9	1-2-3-4a-4b-5-7-8
1	diwplight	craneturningtostamp3	reachedramp
2	diinductiveswitchtrue	checkstampwpavailable	turntoramp
3	opticalsensor	wpsouldbestamped	putwponrampinit
4	inductiveswitch	checkstampisstamping	initmovetoramp
5	i	checkstampautomaticexecute	setreachedramp
6	functionblock	checklargesortingconveyor	
7	unspecified	stampingwp	
8	bool	cranetostack1	
9		reachedstamp	
10		waitingforstacktopprovidewp	
R	10-11-12-13-9	3-4a-4b-5-7	10-11-12-13
1	turnconveyoron	extendstampingcylinder	wptypechecked
2	largesortingconveyor	wait	resetwptype
3	sfcreset	stampingcylinderextended	targetchanged
4	sortwp		currenttargetramp1
5	initcompleted		settargetchanged
6	automaticexecutecompleted		indramp1diwpmetallic
7	wpsorted		countervar
8	interstep		trunconveyoronagain
9	stopconveyors		currenttargetramp2
10	checkallowedtooperate		currenttargetramp3
R	3-4a-4b-5-7-8-9-10-11-12-13	3-4a-4b-7-8-9-10-11-12-13	3-4a-4b-5-7-8-9-10-11-12
1	wpstamped	stampwpstamped	atstampind
2	stamp	unset	atstamp
3	tableatstampdiswitchtrue	bool	microswitch
4	tableatstampinddiinductiveswitch		inductiveswitch
5	gvlissfcresetting		unset
6	reachedstamp		
7	isstamping		
8	checkstampwpavailable		
9	stopcrane		
10	resetpressure		
R	10-11-12-13-7-8-9	10-11-12-13-8-9	1-10-11-12-13-9
1	wptypewhite	setheavypressure	resetconveyorallowedto
2	checkwptypewhite	pressuresensoraicurrentpressure	setwptypeequalsstack
3	opticalsensordiwpflight	metallicpressureok	conveyorallowedtooperate

4	inductivesensordiwpmetallic	whitepressureok	mainstackwptypeblack
5	mainstackwptypewhite	checkcorrectpressure	wptypeblack
6	checkstackwptypewhite	wptypemetallic	variable
7	wpprovided	pressuresensor	literal
8	opticalsensor	extendstampingcylinder	derived
9	wpready	stampingcylinderextended	
10	aicurrentpressure	slidingcylinderretracted	
R	11-12-13	10-12-13	12-13
1	pusher2retract	ramp2	countervarwhite
2	turnconveyoroff3	ramp3	countervarmetallic
3	turnconveyoroff2	rampselection	countervarblack
4	pusher2extending	white	prioritymetallic
5	motorstopped	prioritywhite3	priorityblack
6	wpisorted	prioritywhite2	prioritywhite
7	turnconveyoroff1	selectramp	ramp2
8	doturncounterclockwise	setpriorityblack	ramp3
9	turningcounterclockwise	prioritywhite1	ramp1
10	wptypemetallic	ramp1	metallic
R	10-9	1-2	4b
1	turnconveyoroff	ppu	inductiveswitch
2	transportingtoramp3	stackwpprovided	unset
3	transportingtoramp3tt4000ms	cranewptypeblack	atstackind
4	wpisorted	stackwptypeblack	atstampind
5	motorstopped	cranepickedupstackwp	atrapind
6	turnconveyoronagain	setinitcompleted	
7	currenttargetramp3	ppucranewppickedup	
8	motorturningclockwise	mainstackwpprovided	
9	trunconveyoronagain	main	
10			
R	9	8	2
1	unset	pressurevar	unset
2	conveyorspeed	unset	cranewptypemetallic
3	turnconveyoronagain		stackwptypemetallic
4	wpsorted		bool
5	transportingtoramp3		variable
6	motorturningclockwise		derived
7	bool		ppucranewptypemetallic
8	sfcinit		ppustackwptypemetallic
9	q		cranewptypewhite
10	unspecified		stackwptypewhite
R	13	11	10
1	delta	priorityblack1	extendcylinder
2	aiposition	prioritymetallic1	extended
3	atstamp	prioritywhite1	setextended
4	atstack	ramp2	initactextend
5	atconveyor	ramp3	turnconveyoroff
6	potentiometer	ramp1	diextended
7	iposconveyor	white	pusher2extend
8	iposstamp	metallic	gvlissfcresetting

9	iposstack	black	pusher2retract
10	motor		
R	1		
1	wpready		
2	black		
3	wptypeblack		
4	literal		
5	derived		