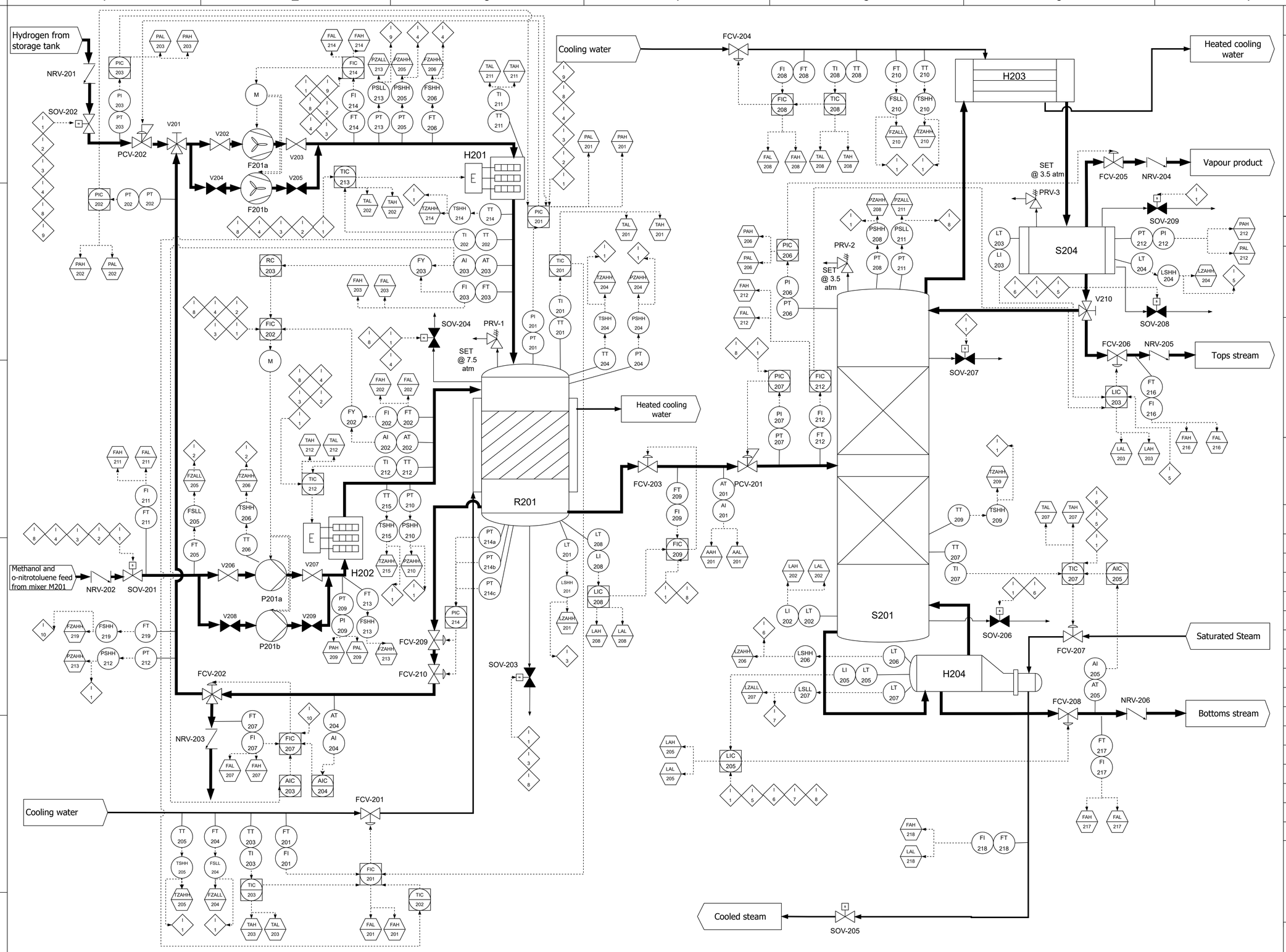

Notes

For clarity, the highest number for each tag is listed below:
TT - 215
PT - 214
LT - 208
FT - 219
AT - 205
PCV - 202
FCV - 210
SOV - 209
V - 210
NRV - 206
PRV - 3

Blacked-out valves indicate valves that are normally in closed position.

Legend

- Main process stream
- Utility stream
- Drainage stream
- Electrical signal
- Standby electrical signals
- Control valve
- Pressure regulating valve
- Solenoid valve
- Gate valve
- Pressure relief valve
- Three way valve
- No-return (Check) valve
- Instrument in field
- Operator accessible controller system mounted in control room
- Interlock
- Alarm

ID for Instruments

Letter	First	Second	Third
A	Composition analyser	Alarm	
C		Control	Controller
F	Flow		
H			High
I	Interlock	Indicator	
L	Level		Low
M	Motor		
N	Non-return		
P	Pressure		
R		Relief	
S	Solenoid	Switch	
T	Temperature		
V	Valve	Valve	Valve
Y		Multiplier	
Z		Interlock computer	

NITROMA

P&ID description:
O-nitrotoluene hydrogenation reactor and solvent distillation

	NAME	DATE
DRAWN	SKT, MJ	08/03/2021
CHECKED	MJ, SKT	10/03/2021
APPROVED	HO	12/03/2021

Equipment tag	R201	P201	F201	H201	H202	S203	H203	S204	H204
Description	Reactor	Pump	Fan	Electric heater	Electric heater	Packed column	Condenser	Reflux drum	Reboiler
Material of construction	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	Copper heating element	Copper heating element	304-S71 Stainless Steel	304-S71 Stainless Steel	304-S71 Stainless Steel	304-S71 Stainless Steel
Design pressure (atm)	5	5	5	5	5	1	1	1	1
Design temperature (°C)	60	60	60	60	60	175	67	67	175
Capacity	3.93 m^3	0.66 m^3/h	0.67 m^3/h	6.38 kW	6.38 kW	0.31 m^3	-38.96 kW	0.15 m^3	127.96 kW