

LAVRADIO UREA PLANT EQUIPMENT LIST

Raw materials and reaction

374-J Ammonia pump (1)
372-C Ammonia heater (1)
381-JC CO2 compressor (1)
301-D Reactor (1)

1st stage decomposition (distillation / condensation)

361-C Evaporator (1)
361-F Gas-liquid separator (1)
362-C Partial condenser (1)
363-C Total condenser (1)
364-C Air cooler (1)
361-J/JA Water circulation pumps (2)
364-J/JA Carbamate pumps (2)
362-F Steam recovery separator (1)
365-F Steam desuperheater (1)
361-L Steam ejector (1)
363-F Gas absorber (1)

2nd stage decomposition (distillation / condensation)

302-C Evaporator (1)
301-F Gas-liquid separator (1)
303-C Condenser (1)
362-J/JA Carbonate pumps (2)
304-F Gas absorber (1)

3rd stage decomposition (distillation / condensation)

365-C Evaporator (1)
303-F Gas-liquid separator (1)
305-C Condenser (1)
303-J/JA Carbonate pumps (2)
304-F Gas absorber (1)

1st stage concentration

304-J/JA Urea solution pumps (2)
367-L/LA Urea filters (2)
366-CA/CB Evaporators (2)
305-F Gas-liquid separator (1)

2nd stage concentration, vacuum system, prilling and effluent treatment

366-J/JA Urea solution pumps (2)
308-C Evaporator (1)
306-F Gas-liquid separator (1)
367-J/JA Molten urea pumps (2)
301-H Prilling tower (1)
367-C 1st stage concentration condensers (1)
318-C 1st stage concentration condensers (1)
321-F Gas-liquid separator (1)
303-E Gas absorber
321-J/JA Distillation column feeding pumps (2)
320-C Heat exchanger (1)
361-E Distillation column (1)
366-F Gas-liquid separator (1)
365-J/JA Pumps (2)
315-C1/C2 Vacuum condensers (2)
H-504A/B/C Primary vacuum steam ejectors (3)
H-505A/B/C Secondary vacuum steam ejectors (3)
302-E Inert gas washing column (1)
319-C Heat exchanger (1)