

AMMONIA STORAGE, HANDLING AND DELIVERY



DEC EnviroSystems

(A Division of DEC Engineering & Constructions Pvt. Ltd.)



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DEC Envirosystems brings in the collective experience, resources and knowledge base of the Mysore Ammonia Group of Companies who are leaders, having 65 years of experience in the storage, handling and delivery of Anhydrous Ammonia & Ammonia solution in India and the Indian Ocean region along with **DEC Engineering & Constructions & CECO ENVIROMENTAL, USA**

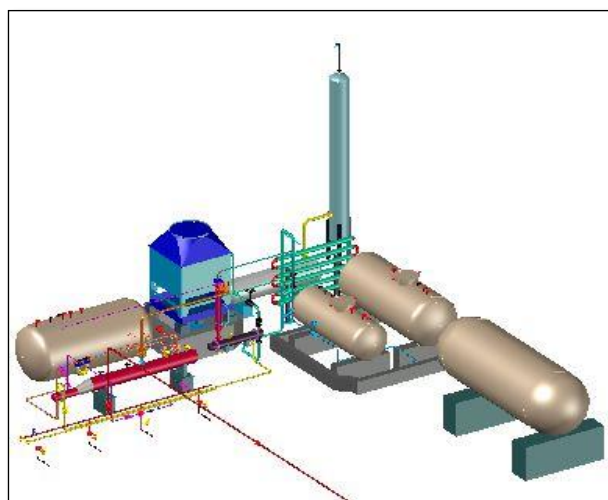
DEC Envirosystems has in house team and capabilities for providing Turnkey solutions for Ammonia Storage & handling Systems and Ammonia Dilution Plants (19 - 29%) conforming to PESO /other statutory guidelines.



Anhydrous Ammonia Unloading & Storage

PRODUCTS AND SERVICES OFFERED INCLUDES:

- ✓ Storage Tanks for Anhydrous Ammonia and Systems for unloading & transfer of Anhydrous Ammonia from Road Tankers to Storage Tanks and user facilities.
- ✓ Vaporizers and Air Dilution Units for SCR Systems.
- ✓ Automatic / Manual Ammonia dilution Plants from 1 to 10 TPH for 19 to 29% solution.
- ✓ Detailed Design and Layouts for above systems in line with PESO guidelines



5 TPH AUTOMATIC DILUTION PLANT

DEC Capabilities in Ammonia Storage and Handling....

- ✓ Anhydrous Ammonia generally comes in Road Tanker (10 MT to 19.9 MT) and is unloaded into Storage Tanks by Compressors / Pumps.
Storage Tanks and unloading systems are designed and fabricated meeting PESO requirements and design criteria of CECO Environmental, USA.
- ✓ Transfer systems including piping, Accumulators etc. to user Plants for applications such as in SCR / SNCR De-NO_x Systems, Ammonia Dilution Plants and other Industries including Pharmaceuticals, Metals etc. is designed and supplied.

DEC Capability in Ammonia Dilution Plants...

Dilution Plants for conversion of Anhydrous Ammonia to Aqueous Ammonia (19% - 30%) can be supplied both for batch and continuous operation. The Units are fully automated and meet all safety requirements. A 5 TPH (19 to 25%) PLC based Unit has been designed, engineered and supplied to Nandesari Unit of Mysore Ammonia Pvt. Ltd.

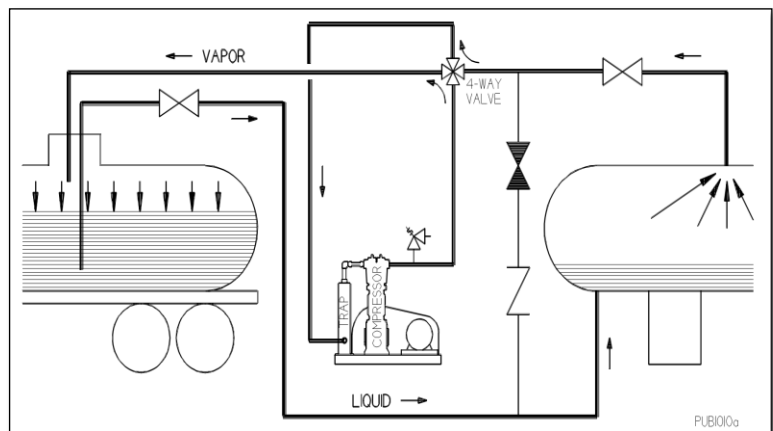


Dilution Unit

Our Technology Partner.....

DEC Envirosystems has Teaming Agreement with Peerless Europe Ltd. Peerless is the leading SCR Ammonia systems provider in the United States. They offer comprehensive design and engineering expertise in Vaporisation, Ammonia flow, Ammonia Injection and process control systems.

- ✓ Peerless has supplied Ammonia Systems for over 150 Units since 1988. These systems range in size from 1.5 Kgs/hr to 1655 Kgs/hr using Ammonia from 19% Aqueous to 99.5% Anhydrous.
- ✓ Peerless also Offer Computational Fluid Dynamics Analysis (CFD Analysis) that can assist Clients on design finalization.
- ✓ Peerless also supplies the following Ammonia systems components:



AMMONIA UNLOADING COMPRESSORS SKID ALONG WITH TRANSFER SYSTEM

DEC Envirosystems in association with Peerless provides Turnkey solutions for large systems comprising of:

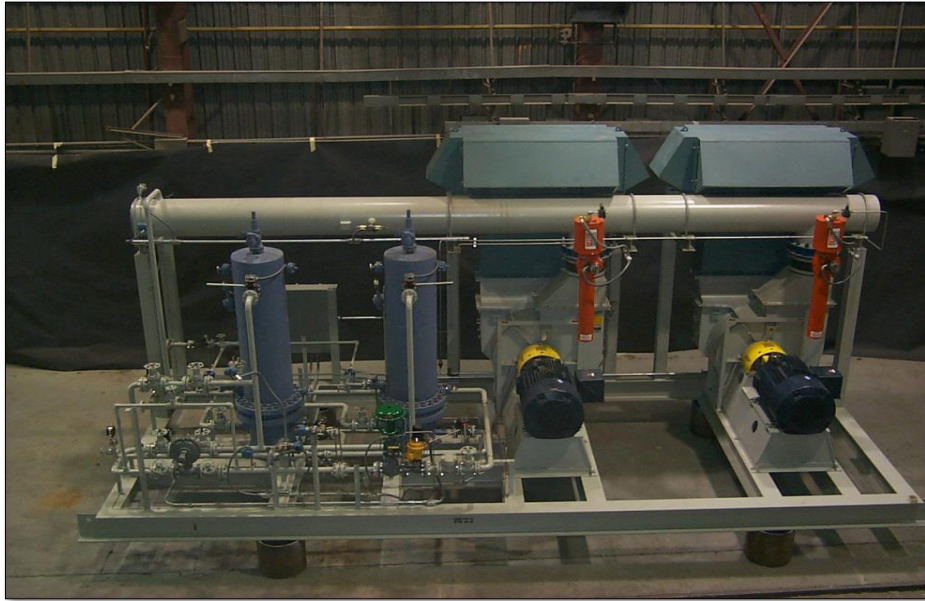
- ✚ Ammonia Storage including Unloading equipment, Aqueous / Anhydrous Storage Tanks, Compressors and Pump skids along with safety equipments.
- ✚ Ammonia Flow control Unit (AFCU)
- ✚ Ammonia Injection Grids
- ✚ Automated Aqueous Ammonia dilution plants.



AMMONIA STEAM VAPORISER



AMMONIA ELECTRIC VAPORISER



AMMONIA FLOW CONTROL UNIT SKID (AFCU)



ONE SINGLE SKID FOR AFCU, AMMONIA VAPORISATION & DILUTION



4 x 55,000 Gallons Aqueous Ammonia SS 304 Storage tanks

Projects undertaken by PEERLESS AARDING EUROPE.....

Peerless Aarding has executed various projects for Ammonia Storage and handling systems having capacities starting from 1.5 kgs/hr to 1655 kgs/hr.

Major Projects executed include:

- + Dominion, Dominion Brayton Point, Somerset, Massachusetts
- + Xcel Energy, A. S. King Plant, Bayport, Minnesota
- + Motiva, Motiva -Norco, Norco, Louisiana
- + Southern Company, Miller Unit 2, Quinton, Alabama
- + Southern Company, Miller Unit 1, Quinton, Alabama
- + OPG, Lambton Project, Ontario, Canada
- + OPG, Nanticoke Project, Ontario, Canada
- + Alabama Power Company, Miller Unit 4, Quinton, Alabama
- + Alabama Power Company, Miller Unit 3, Quinton, Alabama
- + Georgia Power Company, Wansley Units 1 & 2, Roopville, Georgia
- + Georgia Power Company, Plant Bowen Units 3 & 4, Cartersville, Georgia
- + Alabama Power Company, Georgas 10 SCR Project, Parrish, Alabama
- + EEC/AEP Gavin Station, Cheshire, Ohio
- + Plant Bowen, Cartersville, Georgia
- + Virginia Power, Chesterfield, Chester, Virginia
- + Virginia Power, Mount Storm, Mount Storm, West Virginia
- + Edison Mission Energy, Homer City, Homer City, Pennsylvania
- + New Madrid -Unit 2, New Madrid, Missouri
- + New Madrid -Unit 1, New Madrid, Missouri
- + Illinois Power, Baldwin Power Station, Baldwin, Illinois



2 x 60,000 US Gallons Liquid Capacity

Projects undertaken by DEC.....

DEC Envirosystems in association with DEC Engineering and Mysore Ammonia has designed and installed numerous Ammonia Storage Tanks, Unloading and Dilution units in India.

Major Projects executed include:

- ✚ Cross Country Insulated Pipeline (4" and 16") for Anhydrous Ammonia Transportation from Jetty to Tata Chemicals Plant over 1.5 KM at Haldia, West Bengal. Project Managers were ThyssenKrupp.
- ✚ Ammonia Storage along with handling and Manual Dilution Plant at the following locations:
 - ❖ Dilution Plant of 30 MTPD capacity at IDA, Pashmalyaram
 - ❖ Dilution Plant of 10 MTPD capacity at Kalutara, Sri Lanka
- ✚ Ammonia Tonner unloading Facility for Sundram Fasteners, Hyderabad. Installation of Vaporizer is in progress.

with you from concept to commissioning.....