AmmEL-HC

AmmEL Treats Ammonia Contaminated Water.

ENPAR's AmmEL system is a cost effective and environmentally sound process for removing relatively high levels of dissolved ammonia from water.

At the core of the AmmEL system is a patented electrochemical reactor that converts ammonia directly to gaseous nitrogen without producing nitrates or greenhouse gases.

AmmEL-HC is Effective for Numerous Applications.

This advanced technology is well suited for treatment of municipal wastewater and storm water as well as industrial process water and contaminated groundwater.

Municipal wastewater treatment plants can employ AmmEL-HC after sludge dewatering processes to prevent ammonia toxicity to the activated sludge process. It is an excellent complimentary system for treatment facilities during cool weather conditions when nutrient removal in biological reactors slows down. With a high removal rate immediately upon startup, it is able to divert excess loading from existing activated sludge processes during acclimation periods or system upsets.

Testing of the AmmEL-HC system has demonstrated its capabilities with ammonia removal ranging from 93% to 99%.		
	Concentration (mg/L)	Removal (%)
Inlet	500	
Outlet	<5	>99%
Inlet	1000	
Outlet	78	93%

AmmEL is available in two configurations, AmmEL-HC and AmmEL-LC.	
Range of Ammonia Concentration	Treatable with
> 50 to 1000's mg/L	AmmEL-HC
< 50 mg/L	AmmEL-LC

Advantages of the AmmEL –HC System

- Improves performance of existing biological treatment plants by preventing ammonia toxicity in the activated sludge process
- Cost competitive with conventional processes
- Does not convert ammonia to nitrate and does not produce the greenhouse gas N_2O
- Small footprint – can reduce overall cost of land for new biological treatment plants
- Can operate intermittently without start-up delays
- Fully automated – low maintenance
- Remotely monitored

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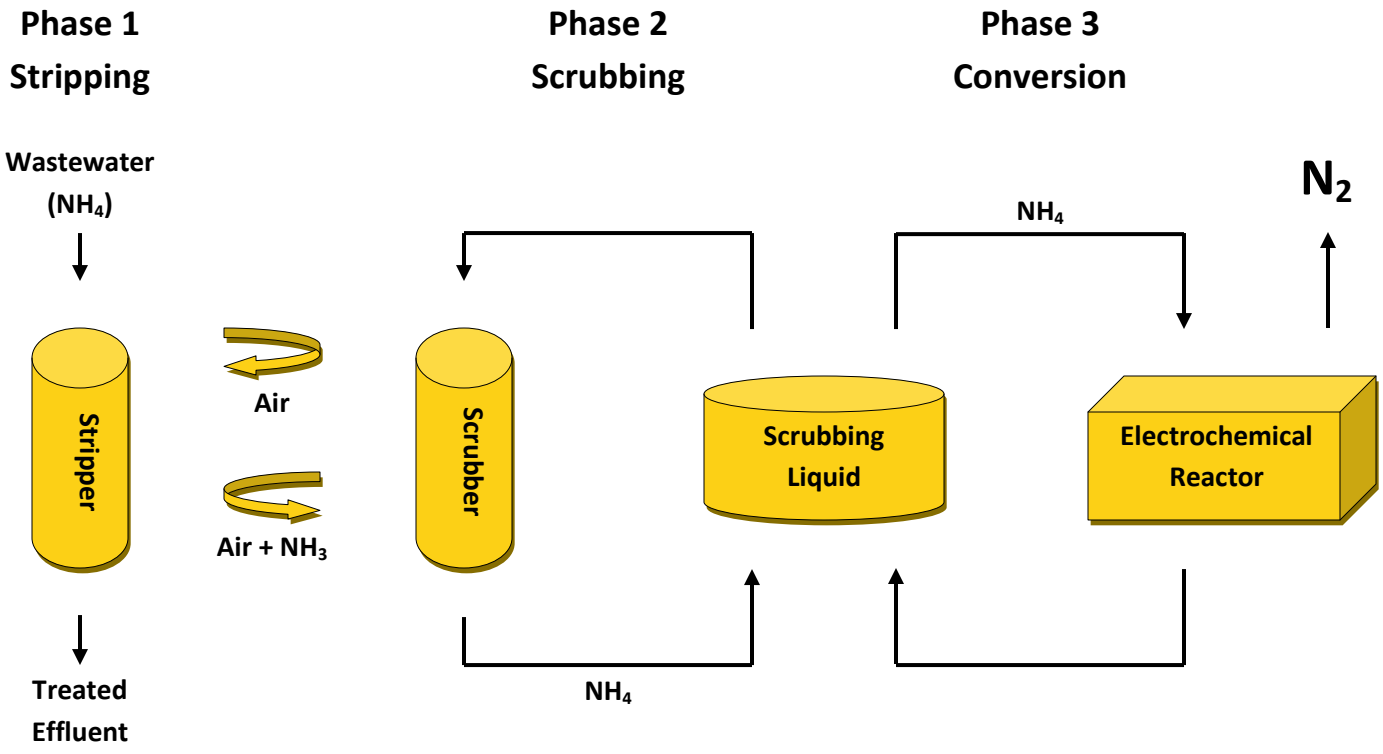
What is AmmEL-HC and how does it work?

AmmEL-HC is a patented ammonia removal process consisting of either strip and scrub columns or membrane technology linked to an electrochemical reactor.

In the case of the strip and scrub approach, there are three phases: stripping ammonia gas from the wastewater, scrubbing the ammonia back into a liquid stream, and electrochemically converting the ammonia to free nitrogen gas.

The pH of the wastewater is increased before being pumped into the top of the stripping column. Air pumped into the bottom of the column transfers the ammonia from the wastewater to liquid in the scrubbing column. The scrubbing liquid is then transferred to the electrochemical reactor where the ammonia is converted to environmentally friendly nitrogen gas.



Enpar Technologies Inc.

CWET
Head Office: 869 Pacific Drive, Delta BC V4M 2K2
Tel: 604-943-1973 or 1-877-943-1973