



KBR Ammonia Experience

New Projects

Kellogg Brown & Root's (KBR's) experience in ammonia plant design dates back to 1943. Since then, our ammonia process technology has undergone several significant updates. The success of our technology is substantiated by the fact that KBR has licensed more than 248 ammonia plants.

KBR has led the ammonia process licensors in developing better ammonia technology. The first large-scale, single-train ammonia plant was engineered and built by KBR and started up in 1963. The first Purifier™ ammonia plant started up in 1966. To date, the Purifier Process has been licensed to more than 40 plants. Since the installation of the first KRES unit in 1994, a total of six KRES units have been successfully installed. Another three KRES units have been awarded and are in different stages of engineering and construction. The first commercial-size KAAP ammonia converter started up in a revamp in 1992, and the first two grassroots KAAP ammonia plants started up in 1998. Five more KAAP plants have since come on-line.

A listing of new KBR ammonia plants licensed since 2000 follows. The legend for the abbreviations is at the end of the table.

Company & Location	Feedstock	KBR Process	Design Capacity MTPD	KBR Scope	Year Online
Northern Petrochemical, Canada	Natural gas	Methanol-Ammonia Co-production	3600 MeOH + 2400 NH ₃	B+PEQ	Ongoing
Stanch Nigeria	Natural gas	Purifier	2300	B+PEQ	Ongoing
Eurochem, Nevinnomysk, Russia	Natural gas	Purifier	3000	B+PEQ	Ongoing
Eurochem, Belorechensk, Russia	Natural gas	Purifier	3000	B+PEQ	Ongoing
ACME, Oman	Green Hydrogen and Nitrogen	Optimised H ₂ storage and Synloop	300	B+PEQ	Ongoing
EHC, Suez, Egypt	Natural gas	Purifier	1320	B+PEQ	Ongoing
Monolith, USA	Hydrogen & Nitrogen	Synloop	930	B+PEQ	Ongoing
Eurochem, Kingisepp - 2, Russia	Natural gas	Purifier	3000	B+PEQ	Ongoing
Talcher, India	Coal	Synloop	2200	B+PEQ	Ongoing
Linggu II, Jingsu, China	Coal	Synloop	1500	B+PEQ	Ongoing
STAVROLEN, Stavropol Krai, Russia	Natural gas	Purifier	3630	B+PEQ	Ongoing
HURL, Gorakhpur, India	Natural gas	Purifier	2420	B+PEQ	Ongoing
PCPL, Taloja, India	Natural gas	Pu+R	1500	B+PEQ	Ongoing
Indorama Eleme, Train 2, Port Harcourt, Nigeria	Natural gas	Purifier	2300	B+PEQ	2021
Chambal Fertilizers & Chemicals Limited, Gadepan, India	Natural gas	Purifier	2200	B+PEQ	2019
Yara-BASF, Freeport, TX, USA	Hydrogen and Nitrogen	Synloop	2200	EPC	2018
PT Petrokimia, Gresik, Indonesia	Natural gas	Purifier	2200	B+PEQ	2018
Eurochem, Kingisepp - I, Russia	Natural gas	Purifier	2890	B+PEQ	2019

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Dyno Nobel, Waggaman, LA, USA	Natural gas	Purifier	2300	EPC	2016
Linggu, Jingsu, China	Coal	Synloop	1500	B+PEQ	2015
PUSRI II B, Palembang, Indonesia	Natural gas	Purifier	2200	B+PEQ	2016
Indorama Eleme, Port Harcourt, Nigeria	Natural gas	Purifier	2300	B+PEQ	2016
PAU, Sulawesi, Indonesia	Natural gas	Pu+R	2090	B+PEQ	2018
YPFB, Cochabamba, Bolivia	Natural gas	Purifier	1200	B+PEQ	2017
Iowa Fertilizer, USA	Natural gas	Purifier	2200	B+PEQ	2017
Matix, Panagarh, India	Natural gas	Purifier	2200	B	2017
Kima, Aswan, Egypt	Natural gas	Purifier	1320	B+PEQ	2020
Petrobras, Tres Lagoas, Brazil	Natural gas	Purifier	2200	B+PEQ	Ongoing
BCIC, Shahjalal, Bangladesh	Natural gas	Purifier	1000	B+PEQ	2015
KALTIM 5, Bontang, Indonesia	Natural gas	Purifier	2700	B+PEQ	2015
China Coal, Inner Mongolia, China	Coal	Synloop	2 X 1660	B	2014
Bodashidi, China	Coal	Synloop	1630	B	2014
Turkmenhimiya, Mary, Turkmenistan	Natural gas	RE	1200	B	2014
Pequiven, Moron, Venezuela	Natural gas	KAAP	1800	E	2014
Jianfeng, Fuling, China	Natural gas	Purifier	1500	B	2010
EBIC, Al Sokhna, Egypt	Natural gas	KAAP	2000	EPC	2009
MHTL, Trinidad	Natural gas	KAAP	1850	E	2009
TACC, Yunnan, China	Coal	Synloop	1660	B	2008
Burrup Fertilisers PL, Australia	Natural gas	Purifier	2200	B	2006
P.T. Pupuk Kujang (IB), Indonesia	Natural gas	RE	1000	B	2005
Nitrogen 2000, Trinidad	Natural gas	KAAP	1850	E	2004
PIM-2, Aceh, Indonesia	Natural gas	RE	1200	B	2004
CNOOC, Hainan Island, China	Natural gas	Purifier	1500	E, P, Ca	2003
Shenzhen Liaohe Tongda, Panjin, PRC	Natural gas	KRES	1100	B, Ca	2003
Caribbean Nitrogen, Trinidad	Natural gas	KAAP	1850	E	2002
SAFCO 3, Al Jubail, Saudi Arabia	Natural gas	Purifier	1500	B	2000

LEGEND FOR KBR PROCESS

- KAAP - KBR Advanced Ammonia Process
- KRES - KBR Reforming Exchanger System
- Synloop - KBR Ammonia Synthesis Process
- Purifier - KBR Purifier Process
- RE - KBR Reduced Energy Process
- Pu+R - Purifier with Reforming Exchanger

LEGEND FOR SCOPE

- B - Basic Engineering Package
- C - Construction
- E - Engineering
- P - Procurement
- a - Advisory Services
- PEQ - Proprietary Equipment

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