

Pressure Swing Adsorption Experience List



Hydrogen Pressure Swing Adsorption (PSA) is a critical technology for refineries and chemical producers that helps them achieve their operational effectiveness and profitability. Air Products is the world's largest supplier of hydrogen and has decades of experience in the design and operation of the H₂ PSA process. The following pages provide a summary of select Air Products' hydrogen PSA experience and innovation over the past 30 years by highlighting key hydrogen generation and recovery system projects.

The continuous delivery of high-purity hydrogen is essential for optimal operation; Air Products understands this, and can work with you to provide the right equipment for your process.

Location	Feed Source	MMSCFD	(Nm3/hr)	Use	Date
Texas, USA	Steam Methane Reformer	175	195,400	Chemicals	Forecast 2022
Kingdom of Saudi Arabia	Steam Methane Reformer	Confidential	Confidential	Refineries	Forecast 2022
China	Coal Gasification SYNGAS	Confidential	Confidential	Chemicals	Forecast 2021
Russia	Natural Gas Processing	Confidential	Confidential	He Recovery	Forecast 2021
Qatar	Natural Gas Processing	Confidential	Confidential	He Recovery	Nov-20
Thailand	Ethylene Off-gas	13.4	15,000	Regional GHY Demand	Mar-20
Texas, USA	Isobutylene Plant Off-Gas	16	17,900	Chemicals	Feb-20
China	CO Cold Box	1.8	2,000	H2 Transfill	Oct-19
Texas, USA	Shift	120	134,000	Refinery	Jun-18
Kerala, India	Steam Methane Reformer	2x90	2 x100,500	Refinery	Jun-17
Alberta, Canada	Steam Methane Reformer	155	173,100	Refinery	Jun-16
Texas, USA	Refinery Off-gas	20	22,300	Refinery	Apr-16
Louisiana, USA	Steam Methane Reformer	155	173,100	Refinery	Oct-15
Michigan, USA	Steam Methane Reformer	62	69,200	Refinery	Oct-14
Thailand	Refinery Off-gas	10	11,200	Refinery	Nov-13
Louisiana, USA	Steam Methane Reformer	120	134,000	Refinery	Oct-13
Rotterdam, NED	Steam Methane Reformer	120	134,000	Refinery	Oct-12
Louisiana, USA	Steam Methane Reformer	120	134,000	Refinery	Oct-10
Louisiana, USA	Steam Methane Reformer	100	111,700	Refinery	Oct-09
Edmonton, Canada	Steam Methane Reformer	105	117,200	Refinery	Apr-08
Texas, USA	Steam Methane Reformer	110	122,800	Refinery	Sep-06
Ontario, Canada	Steam Methane Reformer	82	91,600	Refinery	Jun-06
Edmonton, Canada	Steam Methane Reformer	71	79,300	Refinery	Jun-06
Illinois, USA	Steam Methane Reformer	11	12,300	Refinery	May-06
Texas, USA	Refinery Off-gas	27.4	30,600	Refinery	Dec-05
Texas, USA	Shift	69	77,000	Refinery	Dec-05
Louisiana, USA	Steam Methane Reformer	110	122,800	Refinery	Nov-05
Louisiana, USA	Steam Methane Reformer	110	122,800	Refinery	Jul-04
Switzerland	Steam Methane Reformer	7	7,800	Refinery	Jan-04
South Africa	Refinery Off-gas	2.5	2,800	Metal Refining	Jan-04
Louisiana, USA	Steam Methane Reformer	40	44,700	Refinery	Oct-03
Louisiana, USA	Steam Methane Reformer	40	44,700	Refinery	Oct-03
Kentucky, USA	Steam Methane Reformer	35	39,100	Refinery	Oct-03
Alberta, Canada	Steam Methane Reformer	234	261,300	Refinery	Jun-02

Location	Feed Source	MMSCFD	(Nm3/hr)	Use	Date
Spain	Cryo Off-gas	4.32	4,800	Propane Dehydrogenation	Dec-01
Mexico	Ethylene Off-gas	1	1,100	Chem/Refinery	Dec-01
Spain	Steam Methane Reformer	62	69,200	Refinery	Nov-01
Texas, USA	Steam Methane Reformer	101	112,800	Refinery	Aug-00
Texas, USA	Refinery Off-gas	6	6,700	Refinery	Aug-00
North Carolina, USA	Steam Methane Reformer	1.5	1,700	Chemicals	Jun-00
Czech Republic	Ethylene Off-gas	4	4,500	Chemicals	May-00
Malaysia	Refinery Off-Gas	36	40,200	Refinery	Jan-00
California, USA	Steam Methane Reformer	96	107,200	Refinery	Dec-99
Kansas, USA	Helium Purifier	Confidential	Confidential	Confidential	Oct-99
Louisiana, USA	Ethylene Off-gas	16	17,900	Chem/Refinery	Aug-99
Louisiana, USA	Cryo Off-gas	26	29,000	Chem/Refinery	Jul-99
Michigan, USA	Steam Methane Reformer	1	1,100	Chemicals	Mar-99
South Africa	Refinery Off-Gas	1.8	2,000	Refinery	Jan-99
Tennessee, USA	Steam Methane Reformer	1	1,100	Food Processing	Jun-98
Maryland, USA	Steam Methane Reformer	1	1,100	Food Processing	Feb-98
Louisiana, USA	Refinery Off-gas	0.3	300	Chem/Refinery	Sep-97
Brazil	Steam Meth Ref/Cryo	28	31,300	Chemicals	Aug-97
England, UK	Steam Methane Reformer	18	20,100	Chemicals	Jul-97
Texas, USA	Steam Methane Reformer	80	89,300	Refinery	Oct-96
California, USA	Steam Methane Reformer	80	89,300	Refinery	Jan-96
Texas, USA	Cryo Off-gas	15	16,700	Chem/Refinery	Dec-95
California, USA	Steam Methane Reformer	35	39,100	Refinery	Aug-95
California, USA	Steam Methane Reformer	90	100,500	Refinery	Jul-95
California, USA	Steam Methane Reformer	90	100,500	Refinery	Jul-95
Louisiana, USA	Ethylene Off-gas	20	22,300	Chem/Refinery	Nov-94
Thailand	Ethylene Off-gas	3.7	4,100	Chem/Refinery	Oct-94
Texas, USA	MTBE Off-gas	13.5	15,100	Chem/Refinery	May-94
Netherlands	Steam Methane Reformer	80	89,300	Refinery	May-94
Florida, USA	NH3 Reformer	13	14,500	Merchant/Rkt Fuel	Jan-94
Texas, USA	Cryo Off-gas	15	16,700	Chem/Refinery	Dec-93
Algeria	Helium Purifier	Confidential		Confidential	Dec-93
California, USA	Steam Methane Reformer	26	29,000	Refinery	Nov-93
Texas, USA	Cryo Off-gas	15	16,700	Chem/Refinery	Nov-93
Wyoming, USA	Steam Methane Reformer	5.5	6,100	Refinery	Aug-93
Malaysia	Steam Methane Reformer	2.4	2,700	H2O2	May-93

Location	Feed Source	MMSCFD	(Nm3/hr)	Use	Date
Louisiana, USA	Styrene Plant Off-gas	28	31,300	Refinery	May-93
Illinois, USA	Steam Methane Reformer	1.5	1,700	Fumed Silica	Nov-92
Ohio, USA	Steam Methane Reformer	2.3	2,600	Fatty Alcohols	Sep-92
Texas, USA	POX/Methanol Off-gas	30	33,500	Chem/Refinery	Jul-92
Louisiana, USA	Ethylene Plant Off-gas	15.5	17,300	Aniline	Oct-91
Kansas, USA	Helium Purifier	Confidential		Confidential	Aug-91
Alabama, USA	Steam Methane Reformer	7.5	8,400	Confidential	Mar-90
California, USA	Steam Methane Reformer	5	5,600	Fatty Alcohols	Jun-89
Ohio, USA	Landfill Gas	3	3,300	Utilities	Feb-87
Pennsylvania, USA	Steam Methane Reformer	1.7	1,900	Metal Annealing	Nov-86

1) All units are H₂ PSAs (i.e. product is pure H₂ Product) except the few PSAs identifying Helium

Let us provide you
a quote today!

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