

LIST OF THE MAIN JOBS PERFORMED

Equipment & Description of the Job	Client / Plant	Period
UREA SYNTHESIS REACTOR <ul style="list-style-type: none"> ➤ Relining of 8.25 meters of cylindrical area ➤ Relining of manway neck ➤ Repair of liner ➤ Repair of support cleats 	PETROVIETNAM FERTILIZER AND CHEMICAL CORPORATION Phu My – Vung Tau VIETNAM	March / April 2023
AMMONIA PRIMARY REFORMER <ul style="list-style-type: none"> ➤ Replacement of No. 288 Catalyst tubes 	SOHAR INTERNATIONAL UREA AND CHEMICAL INDUSTRIES LLC Port of Sohar Sultanate of Oman	February / March 2023
No.1 BIMETALLIC HP UREA STRIPPER Unit 01 <ul style="list-style-type: none"> ➤ Shortening in-situ (without removing the stripper from its position) ➤ Modification of the protrusion of tubes on the bottom tubesheet from 5mm to 18mm ➤ Remaking of all bottom tube to tubesheet welds 	IFFCO Indian Farmers Fertilizer Co. PHULPUR II Unit Ghiyanagar, UP INDIA	May / June 2022
UREA SYNTHESIS REACTOR <ul style="list-style-type: none"> ➤ Partial relining ➤ Repair and replacement of tray supports ➤ Repair of existing liner AMMONIA PRIMARY REFORMER <ul style="list-style-type: none"> ➤ Welding of Catalyst tubes 	OMIFCO Oman India Fertilizer Company SAOC SUR Sultanate of Oman	March / April 2022
UREA SYNTHESIS REACTOR <ul style="list-style-type: none"> ➤ Opening of trays, inspection and repair of liner welds ➤ Installation of No. 6 new SAIPEM Supercups® trays HP PROCESS PIPING <ul style="list-style-type: none"> ➤ Opening and box up of HP valves and flanges ➤ Modification of HP lines to improve alignment and reduce leaks 	GPIC Gulf Petrochemical Industries Co. Al-Manama BAHRAIN	March 2022
No. 2 BIMETALLIC HP UREA STRIPPERS Unit 31/41 <ul style="list-style-type: none"> ➤ Shortening in-situ (without removing the stripper from its position) ➤ Modification of the protrusion of tubes on the bottom tubesheet from 5mm to 18mm ➤ Remaking of all bottom tube to tubesheet welds 	IFFCO Indian Farmers Fertilizer Co. PHULPUR II Unit Ghiyanagar, UP INDIA	January/February 2022
UREA SYNTHESIS REACTOR <ul style="list-style-type: none"> ➤ Relining of top dome ➤ Relining of 6 courses on cylindrical area HP PROCESS PIPING <ul style="list-style-type: none"> ➤ Replacement of No. 9 elbows 	PETRONAS CHEMICALS FERTILIZER KEDAH Gurun. Kedah Malaysia	June / July 2021
UREA SYNTHESIS REACTOR <ul style="list-style-type: none"> ➤ Relining of 12.4 meters of cylindrical area ➤ Repair of liner ➤ Installation of supports for new Supercups tray 	BRANCH OF PETROVIETNAM FERTILIZER AND CHEMICAL CORPORATION Phu My – Vung Tau VIETNAM	April / May 2021
UREA SYNTHESIS REACTOR <ul style="list-style-type: none"> ➤ Partial relining ➤ Repair and replacement of tray supports ➤ Repair of existing liner 	OMIFCO Oman India Fertilizer Company SAOC SUR Sultanate of Oman	February / March 2021

LIST OF THE MAIN JOBS PERFORMED

Equipment & Description of the Job	Client / Plant	Period
<u>TITANIUM AMMONIA CONDENSER</u> ➤ Remove of plugs ➤ Partial retubing (68 tubes)	GPIC Gulf Petrochemical Industries Co. Al-Manama BAHRAIN	March 2020
<u>TITANIUM STEAM CONDENSER</u> ➤ Removal of No. 5 tubes ➤ Plugging of No. 5 + 5 holes	SABIC – Saudi Arabian Basic Company. At AR-RAZI A SABIC AND JAPAN SAUDI ARABIA METHANOL COMPANY AL JUBAIL KINGDOM OF SAUDI ARABIA	March 2020
<u>UREA SYNTHESIS REACTOR</u> ➤ Partial relining ➤ Repair and replacement of tray supports ➤ Repair of existing liner	OMIFCO Oman India Fertilizer Company SAOC SUR Sultanate of Oman	February / March 2020
<u>SOLID 25.22.2 HP STRIPPER</u> ➤ Modification of internals ➤ Replacement of ferrules <u>HP CARBAMATE SEPARATOR</u> ➤ Repair ➤ Relining	YARA ITALIA SPA At YARA ITALIA urea plant FERRARA, Italy	November 2019
<u>UREA SYNTHESIS REACTOR</u> ➤ Relining of No. 2 courses ➤ Replacement of No. 2 trays ➤ Replacement of No. 2 elbows in the distributors	YARA ITALIA SPA At YARA ITALIA urea plant FERRARA, Italy	September / October 2019
<u>UREA SYNTHESIS REACTOR</u> ➤ Partial relining ➤ Repair	CASALE SA At TOGLIATTIAZOT Togliatti Russia	September / October 2019
<u>UREA SYNTHESIS REACTOR</u> ➤ Replacement of neck liner and gasket seat on top manway ➤ Relining of 5m ➤ Repair of 100% of welds liner and tray supports	FERTILIZANTES NITROGENADOS VENEZUELA (FERTINITRO) Barcelona VENEZUELA	February / March 2019
<u>UREA SYNTHESIS REACTOR</u> ➤ Installation of new SUPERCUPS® TRAY #18	PETROVIETNAM CAMAU FERTILIZER JOINT STOCK COMPANY Ca Mau Vietnam	August 2018
<u>UREA SYNTHESIS REACTOR</u> ➤ Relining of 15.5m <u>CARBAMATE CONDENSER</u> ➤ Partial relining of channel <u>HP PROCESS PIPING</u> ➤ Modification	PETRONAS CHEMICALS FERTILIZER KEDAH Gurun. Kedah Malaysia	July / August 2018

LIST OF THE MAIN JOBS PERFORMED

Equipment & Description of the Job	Client / Plant	Period
<u>UREA SYNTHESIS REACTOR</u> ➤ Relining of the area between tray #14 and bottom tangent line ➤ Replacement of nozzle N1 <u>CARBAMATE SEPARATOR</u> ➤ Rehabilitation <u>HP PROCESS PIPING</u> ➤ Repair and modification	GPIC Gulf Petrochemical Industries Co. Al-Manama BAHRAIN	April 2018
<u>UREA SYNTHESIS REACTOR</u> ➤ Relining of top dome ➤ Relining of 8.2 meters of cylindrical area ➤ Repair of liner	BRANCH OF PETROVIETNAM FERTILIZER AND CHEMICAL CORPORATION Phu My – Vung Tau VIETNAM	November / December 2017
<u>BIMETALLIC UREA HP STRIPPER</u> ➤ Shortening in-situ (without removing the stripper from its position) ➤ Modification of the protrusion of tubes on the bottom tubesheet from 5mm to 18mm ➤ Remaking of all bottom tube to tubesheet welds	KRIBHCO FERTILIZERS LTD. PIPROLA, Shahajhnpur, UP INDIA	September / October 2017
<u>BIMETALLIC UREA HP STRIPPER</u> ➤ Shortening in-situ (without removing the stripper from its position) ➤ Modification of the protrusion of tubes on the bottom tubesheet from 5mm to 18mm ➤ Remaking of all bottom tube to tubesheet welds	IFFCO Indian Farmers Fertilizer Co. AONLA Unit Bareilly, UP INDIA	July/August 2017
<u>UREA SYNTHESIS REACTOR</u> ➤ Complete replacement of titanium liner by cutting and re-welding the top portion of the pressure shell	CHITTAGONG UREA FERTILIZER LTD. Chittagong, Bangladesh.	March / July 2017
<u>BIMETALLIC UREA HP STRIPPER</u> ➤ Shortening in-situ (without removing the stripper from its position) ➤ Modification of the protrusion of tubes on the bottom tubesheet from 5mm to 18mm ➤ Remaking of all bottom tube to tubesheet welds	IFFCO Indian Farmers Fertilizer Co. AONLA Unit Bareilly, UP INDIA	June / July 2016
<u>UREA SYNTHESIS REACTOR</u> ➤ Removal and replacement of No. 1 liner course ➤ Modification of carbamate inlet and solution outlet lines	YARA ITALIA SPA At YARA ITALIA urea plant FERRARA, Italy	May / June 2016
<u>UREA SYNTHESIS REACTOR</u> ➤ Complete removal and replacement of titanium liner by cutting open the pressure shell	CHITTAGONG UREA FERTILIZER LTD. Chittagong, Bangladesh.	September / December 2015
<u>SOLID 25.22.2 HP STRIPPER</u> ➤ Machining of the stripper tubes top end ➤ Modification of the stripper ferrules ➤ Design and fabrication of new grid	YARA ITALIA SPA At YARA ITALIA urea plant FERRARA, Italy	September / November 2015

LIST OF THE MAIN JOBS PERFORMED

Equipment & Description of the Job	Client / Plant	Period
<u>UREA SYNTHESIS REACTOR</u> ➤ Second phase of relining SOLID 25.22.2 HP STRIPPER ➤ Supply of ferrules for Urea Stripper	YARA ITALIA SPA At YARA ITALIA urea plant FERRARA, Italy	September / November 2015
<u>UREA SYNTHESIS REACTOR</u> ➤ Repair, modification and relining HP PROCESS PIPING ➤ Modification	PETRONAS CHEMICALS FERTILIZER KEDAH Gurun. Kedah Malaysia	May / June 2015
<u>UREA SYNTHESIS REACTOR</u> ➤ Relining of 10.6m of cylindrical area. CARBAMATE SEPARATOR ➤ Rehabilitation HP PROCESS PIPING ➤ Repair and modification	GPIC Gulf Petrochemical Industries Co. Al-Manama BAHRAIN	April 2015
<u>UREA SYNTHESIS REACTOR</u> ➤ Repair of titanium liner	CHITTAGONG UREA FERTILIZER LTD. Chittagong, Bangladesh.	November / December 2014
<u>UREA SYNTHESIS REACTOR</u> Item R501-2: ➤ Replacement of all tray supports ➤ Installation of new trays ➤ Repair of liner welds ➤ Relining of top dome	STATE COMPANY OF SOUTHERN FERTILIZERS – SCF Khor Al Zubair IRAQ	September / October 2014
<u>UREA SYNTHESIS REACTOR</u> ➤ Second phase of relining – relining of lower half and bottom dome.	BANGLADESH CHEMICAL INDUSTRIES CORPORATION At JAMUNA FERTILIZER COMPANY LTD TARAKANDI, JAMALPUR BANGLADESH	June / July 2014
<u>UREA SYNTHESIS REACTOR</u> Item R501-1: ➤ Replacement of all tray supports ➤ Installation of new trays ➤ Repair of liner welds ➤ Relining of top dome	STATE COMPANY OF SOUTHERN FERTILIZERS – SCF Khor Al Zubair IRAQ	May 2014
<u>SOLID 25.22.2 HP UREA STRIPPER</u> ➤ Emergency repair	KOCH FERTILIZER CANADA, ULC. Brandon (MB) CANADA	December 2013
<u>METHANOL CONVERTER</u> ➤ Repair and re-welding of 304H and Incoloy 800 tubes	OMAN METHANOL Oman	December 2013
<u>AMMONIA CONVERTER</u> ➤ Repair under Nitrogen blanket	PROMAN A.G., Germany At: CNC AMMONIA PLANT Trinidad and Tobago	November 2013

LIST OF THE MAIN JOBS PERFORMED

Equipment & Description of the Job	Client / Plant	Period
<u>CARBAMATE CONDENSER</u> ➤ Emergency repair	PETRONAS CHEMICALS FERTILIZER KEDAH Gurun. Kedah Malaysia	October 2013
<u>TITANIUM HP UREA STRIPPER</u> ➤ Replacement of top channel <u>HP PROCESS PIPING</u> ➤ Modification – replacement of spools	SABIC Saudi Basic Industries Co. At: SAFCO IBN AL BAYTAR PLANT Al Jubail KINGDOM OF SAUDI ARABIA	April 2013
<u>UREA SYNTHESIS REACTOR</u> ➤ Relining of 10.6m of cylindrical area. <u>HP PROCESS PIPING</u> ➤ Replacement of reactor-o-stripper and carbamate separator-to-reactor line	GPIC Gulf Petrochemical Industries Co. Al-Manama BAHRAIN	November 2012
<u>UREA SYNTHESIS REACTOR</u> ➤ Relining of 8m of cylindrical area <u>HP PROCESS PIPING</u> ➤ Modification, replacement of elbows and spools	PETRONAS CHEMICALS FERTILIZER KEDAH Gurun. Kedah Malaysia	September 2012
<u>AMMONIA CONVERTER</u> ➤ Extensive repair <u>HP PROCESS PIPING</u> ➤ Partial replacement	KAFCO Karnapuli Fertilizer Company LTD. Chittagong BANGLADESH	May 2012
<u>TITANIUM HP UREA STRIPPER</u> ➤ Emergency repair of titanium liner	SABIC Saudi Basic Industries Co. At: SAFCO IBN AL BAYTAR PLANT Al Jubail KINGDOM OF SAUDI ARABIA	January / February 2012
<u>UREA SYNTHESIS REACTOR</u> ➤ Relining of top dome and 8m of cylindrical portion	YARA ITALIA SPA At YARA ITALIA urea plant FERRARA, Italy	May / June 2011
<u>TITANIUM HP UREA STRIPPER</u> ➤ Relining of top channel	SABIC Saudi Basic Industries Co. At: SAFCO IBN AL BAYTAR PLANT Al Jubail KINGDOM OF SAUDI ARABIA	April / May 2011
<u>UREA SYNTHESIS REACTOR</u> ➤ Replacement of top manway liner and gasket seating ring	SABIC Saudi Basic Industries Co. At: SAFCO IBN AL BAYTAR PLANT Al Jubail KINGDOM OF SAUDI ARABIA	April 2011
<u>ZIRCONIUM HP UREA STRIPPER</u> ➤ Inspection and repair.	PROFERTIL Bahia Blanca ARGENTINA	September 2010

LIST OF THE MAIN JOBS PERFORMED

Equipment & Description of the Job	Client / Plant	Period
UREA SYNTHESIS REACTOR ➤ Relining of Urea Total Recycle Secondary Reactor.	KOCH FERTILIZER CANADA, ULC. Brandon (MB) CANADA	June / July 2010
UREA SYNTHESIS REACTOR ➤ Relining of top dome and of 22.5 meters of the cylindrical portion. ➤ Supply of bolts, nuts and washers for the sieve trays.	BANGLADESH CHEMICAL INDUSTRIES CORPORATION At JAMUNA FERTILIZER COMPANY LTD Tarakandi, Jamalpur BANGLADESH	April / May 2010
UREA SYNTHESIS REACTOR ➤ Relining of the area included between tray #1 and tray #5. ➤ Repair of liner welds. HP PROCESS PIPING ➤ Modification of high pressure piping for the installation of a new stripper. BIMETALLIC HP UREA STRIPPER ➤ Repair of the tube-to-tubesheet welds and the channel liner of the old stripper	GPIC Gulf Petrochemical Industries Co. Al-Manama BAHRAIN	February / March 2010
TITANIUM HP UREA STRIPPER ➤ Repair of liner and tube-to-tubesheet welds and replacement of cover strips.	CHONGQING JIANGFENG CHEMICAL COMPANY Baitao Town, Fuling District, Chongqing CHINA	November 2009
UREA SYNTHESIS REACTOR ➤ Supply and installation of top hoist. ➤ Repair of liner welds. ➤ Supply and installation of No. 5 new sieve trays. ➤ Supply of material for overflow pipe.	PETRONAS CHEMICALS FERTILIZER KEDAH Gurun. Kedah Malaysia	August 2009
UREA SYNTHESIS REACTOR ➤ Emergency repair of the liner welds.	PETRONAS CHEMICALS FERTILIZER KEDAH Gurun. Kedah Malaysia	December 2007 / January 2008
UREA SYNTHESIS REACTOR ➤ Replacement of the gasket seating ring on the manhole flange. ➤ Relining of the top dome and 1.5 meters of the cylindrical portion. ➤ Repair of liner welds. ➤ Supply and installation of No. 9 new sieve trays. BIMETALLIC HP UREA STRIPPER ➤ Repair of tube-to-tubesheet welds.	GPIC Gulf Petrochemical Industries Co. Al-Manama BAHRAIN	November 2007
UREA SYNTHESIS REACTOR ➤ Relining of 7.5 meters of the cylindrical portion between tray #5 and tray #9. ➤ Supply and installation of load-limiting device for the top hoist. TITANIUM HP UREA STRIPPER ➤ Relining of the top channel.	SABIC Saudi Basic Industries Co. At: SAFCO IBN AL BAYTAR PLANT Al Jubail KINGDOM OF SAUDI ARABIA	June 2007

LIST OF THE MAIN JOBS PERFORMED

Equipment & Description of the Job	Client / Plant	Period
<p><u>AMMONIA PRIMARY REFORMER</u></p> <ul style="list-style-type: none"> ➤ Re-design and replacement of No. 1 complete coil ➤ Replacement of No. 2 headers and No. 1 row of finned tubes on a second coil ➤ Replacement of No. 1 header in a third coil. <p><u>SOLID 25.22.2 HP STRIPPER</u></p> <ul style="list-style-type: none"> ➤ Modification of gasket type from Delta to Cam Profile, with replacement of the gasket seating ring, on the high pressure flanges. ➤ Supply of ferrules and ferrule stay grid for No. 2 strippers. <p><u>UREA SYNTHESIS REACTOR</u></p> <ul style="list-style-type: none"> ➤ Modification of gasket type from Delta to Cam Profile, with replacement of the gasket seating ring, on the manhole flange. 	<p>YARA ITALIA SPA Ferrara ITALY</p>	<p>October 2006</p>
<p><u>UREA SYNTHESIS REACTOR</u></p> <ul style="list-style-type: none"> ➤ Repair of tray supports 	<p>FERILIZANTES NITROGENADOS DE VENEZUELA (FERTINITRO) Barcelona, VENEZUELA</p>	<p>October 2005</p>
<p><u>UREA SYNTHESIS REACTOR</u></p> <ul style="list-style-type: none"> ➤ Installation of load-limiting device in the reactor's top hoist. ➤ Installation of new liner strips over the existing liner at tray #13 and #14 elevation. ➤ Repair of liner welds. ➤ Replacement of overflow pipe. <p><u>H.P. PROCESS PIPING</u></p> <ul style="list-style-type: none"> ➤ Replacement of stub ends <p><u>BIMETALLIC H.P. UREA STRIPPER</u></p> <ul style="list-style-type: none"> ➤ Repair of bimetallic stripper tube-to-tubesheet welds. 	<p>GPIC Gulf Petrochemical Industries Co. Al-Manama, BAHRAIN</p>	<p>June 2005</p>