

#### FTS SERVICE PROGRAM – TAILOR-MADE FOR YOU

At PETRONAS, we believe success is made by close partnerships. It is that very belief that drives us to work together with you in overcoming the challenges you face – from demands of higher productivity to operating under intense, severe conditions.

That's why we present to you our **Fluid Technology Solutions™** Service Program – a tailor-made range of services designed to maximise your business performance. From specialised on-site analysis to emergency support for operational recovery, we are committed to assisting you in every possible situation.

Partner with us and take your business to the next level.



#### PROVEN EXPERTS, ALWAYS READY TO HELP!

At the heart of our services, our experts strive to give you the peace-of-mind you're looking for.

Partner with us and take your business to the next level.

For more information, please contact:

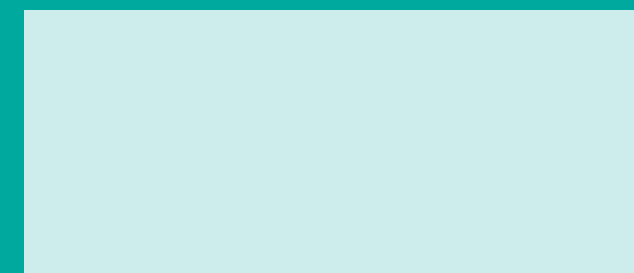


Image - courtesy of LafargeHolcim Poland



#### PETRONAS Fluid Technology Solutions™

##### YOUR PARTNER FOR PROGRESS

PETRONAS Lubricants International (PLI) is the global lubricant division of PETRONAS, one of the most successful petrochemical companies in the world.

Our mission is to deliver proven product technology and related services benefitting from our 100 years of experience. We believe in maximising your productivity with value-added products and services that are global, yet personal – our presence in 128 countries ensures our technical expertise reaches you wherever you are.

PLI's differentiator is product excellence, developed by world-class Technology Centres and brought to your market with local expertise. Our passion for performance improvement makes us an obvious choice for key OEMs and delivers success in Formula One Motorsport. Now, it has translated into a comprehensive industrial product range and tailor-made services for you.

Together, let's take your  
operational performance  
to the next level.



##### YOUR CHALLENGES, OUR EXPERTISE

Today, cement manufacturers are under mounting pressure to increase productivity and reduce costs, whilst reducing their impact on the environment. For a process that utilises a wide range of machinery that is exposed to high levels of dust contamination, high shock loads and extreme temperatures, high quality lubricants are essential to prevent unexpected and costly breakdowns and to extend maintenance intervals and the operating life of the equipment.

As the preferred strategic partner and provider of lubrication solutions to major cement producers worldwide, we have

gained a thorough understanding of the lubrication requirements and challenges facing your business.

With a holistic approach in mind, we have developed **Fluid Technology Solutions™**, an intelligent approach to your fluid requirements that maximises your business performance through tailor-made product offerings and expert services. It is designed to help your business reach new levels in productivity and profitability by enabling improved efficiency and quality.

With PETRONAS on board, you can be assured of a reliable partner for progress.



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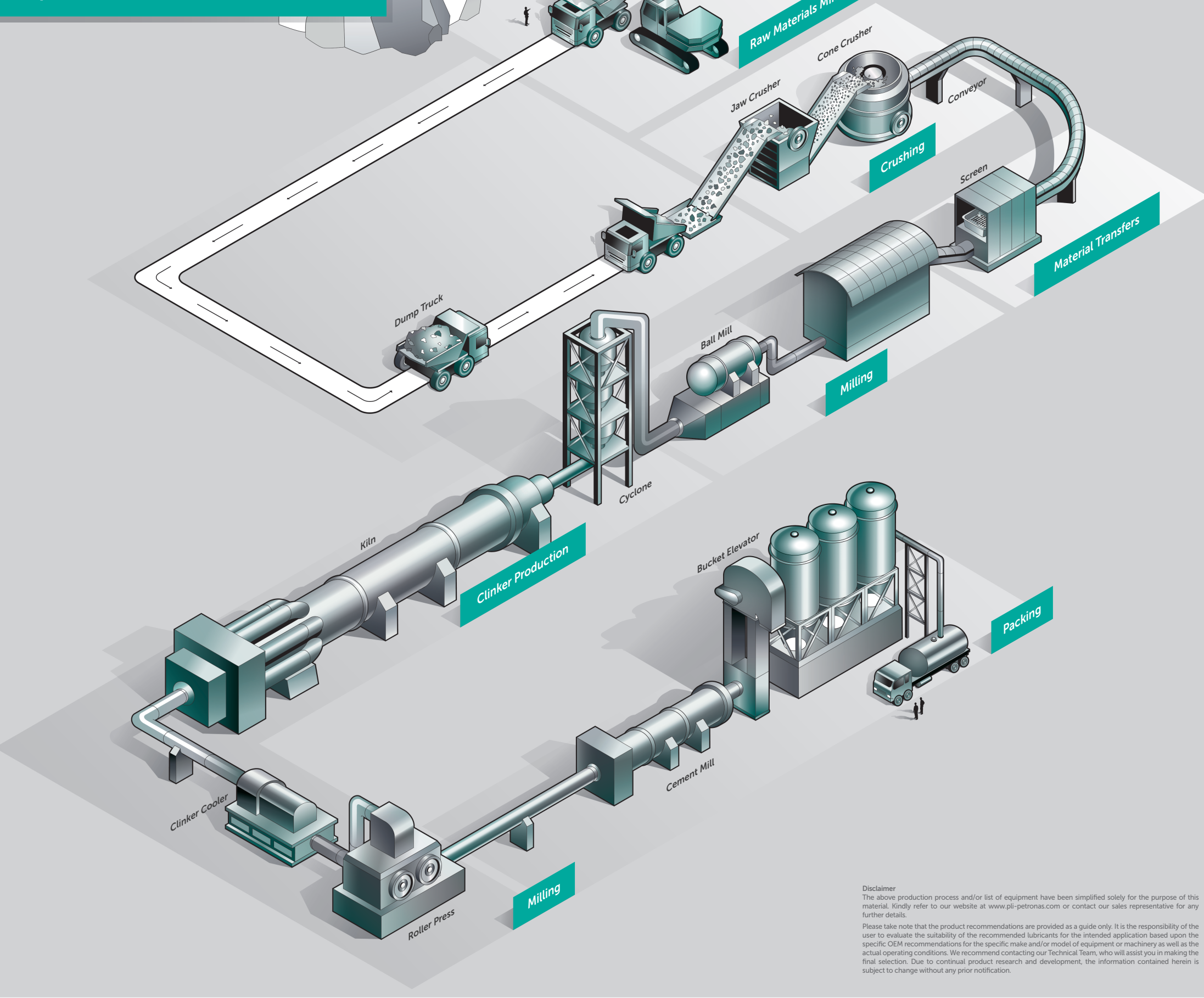
YOUR KEY TO MAXIMISING PERFORMANCE

By focusing our expertise and utilising the latest advances in lubrication technology, we have developed a comprehensive range of state-of-the-art lubricants that meets the needs of all cement production equipment. Choose the correct lubricant for equipment requirements and watch your productivity accelerate to the next level.



PRIMARY PROCESS	KEY EQUIPMENT	KEY LUBRICATION PARTS	LUBRICANT	STANDARD	PREMIUM	SUPREME
Raw Materials Mining	Drilling Machine	Cooling System	Coolant Fluid	PETRONAS Paraflu 11	PETRONAS Paraflu Up Ready	
		Compressor	Air Compressor Oil	PETRONAS Compressor A M 2	PETRONAS Compressor A M 4	PETRONAS Compressor A PAO
		Engine	Engine Oil	PETRONAS Urania LD 7	PETRONAS Urania 5000E	PETRONAS Urania 7000E
		Hydraulic System	Hydraulic Fluid	PETRONAS Hydraulic	PETRONAS Hydraulic HV	PETRONAS Hydraulic ESF
		Pneumatic Drill Head	Air Tool Oil	PETRONAS ATO		
		Thread Compound	Grease	PETRONAS Grease Li AS		
		Transmission	Transmission Fluid	PETRONAS Powertrans T4 50W		
	Wheel Loaders, Excavators, Bulldozers, Dump Trucks	Slewing Ring	Grease			PETRONAS Grease LiCa MG HL
		Vertical Bearing	Grease		PETRONAS Grease CaSx	PETRONAS Grease LiX Syn 2/220
		Cooling System	Coolant Fluid	PETRONAS Paraflu 11	PETRONAS Paraflu Up Ready	
		Engine	Engine Oil	PETRONAS Urania LD 7	PETRONAS Urania 5000E	PETRONAS Urania 7000E
		Final Drive	Transmission Fluid	PETRONAS Powertrans T4 50W		
		Grease Points	Grease	PETRONAS Grease LiX MEP	PETRONAS Grease LiCa MG HL	PETRONAS Grease LiCa MG XHL
		Hydraulic System / Steering	Transmission Fluid	PETRONAS Powertrans T4 10W		
Materials Transfers	Conveyors / Feeders / Screens	Bearings	Grease	PETRONAS Grease Li EP 2		PETRONAS Grease LiX Syn 2/220
		Coupling <sup>(1)</sup>	Grease	PETRONAS Grease Li 2	PETRONAS Grease PE HS	
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Gear Syn PAO
	Blowers	Hydraulic System	Hydraulic Fluid	PETRONAS Hydraulic	PETRONAS Hydraulic HV	PETRONAS Hydraulic ESF
		Blowers	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Gear Syn PAO
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
	Bucket Elevators / Screw Conveyors	Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Gear Syn PAO
		Plumber Block Bearing	Grease	PETRONAS Grease LiX EP 2/380		PETRONAS Grease CaSx
		Cables	Grease	PETRONAS Grease LiCa GEP 2.5		
	Stackers / Reclaimers	Chain	Slideway Oil	PETRONAS Slideway		
		Bearings	Grease	PETRONAS Grease LiX EP 2/380		PETRONSA Grease LiX Syn 2/220
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Gear Syn PAO
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
Crushing	Cone / Gyratory / Impact / Jaw / Roller Crushers	Open Gears	Grease	PETRONAS Grease LiCa TMG		
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Gear Syn PAO
		Hydraulic System	Hydraulic Fluid	PETRONAS Hydraulic	PETRONAS Hydraulic HV	PETRONAS Hydraulic ESF
		Plain Bearings (Oil)	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Gear Syn PAO
		Plain Bearings / Roller Bearings <sup>(2)</sup>	Grease	PETRONAS Grease LiCa MG HL	PETRONAS Grease LiCa MG XHL	PETRONAS Grease LiCa MG XHL
Milling	Vertical Rotler Mill	Spider Bush Bearing	Grease	PETRONAS Grease LiX MEP	PETRONAS Grease LiCa MG HL	PETRONAS Grease LiCa MG XHL
		Spider Bush Bearing (Oil)	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Gear Syn PAO
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Electric Motor - Plain Bearing (Oil)	Hydraulic Fluid	PETRONAS Hydraulic	PETRONAS Hydraulic HV	PETRONAS Hydraulic ESF
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Gear Syn PAO
		Hydraulic System	Hydraulic Fluid	PETRONAS Hydraulic	PETRONAS Hydraulic HV	PETRONAS Hydraulic ESF

Simplified Cement Production Process



PRIMARY PROCESS	KEY EQUIPMENT	KEY LUBRICATION PARTS	LUBRICANT	STANDARD	PREMIUM	SUPREME
Milling	Horizontal Ball Mill	Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	PETRONAS Hydraulic ESF
		Electric Motor (Oil)	Hydraulic Fluid	PETRONAS Hydraulic	PETRONAS Hydraulic HV	PETRONAS Gear Syn PAO
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Hydraulic ESF
		Hydraulic System	Hydraulic Fluid	PETRONAS Hydraulic	PETRONAS Hydraulic HV	PETRONAS Circula Syn
		Plain Bearings (Oil)	Circulating Oil	PETRONAS Circula		PETRONAS Grease LiX Syn 2/460
		Slipper Pad Bearing (Grease)	Grease	PETRONAS Grease LiX EP 2/380		PETRONAS Circula Syn
	Homogeniser	Slipper Pad Bearing (Oil)	Circulating Oil	PETRONAS Circula		PETRONAS Compressor A PAO
		Compressor	Air Compressor Oil	PETRONAS Compressor A M 2	PETRONAS Compressor A M 4	PETRONAS Gear Syn PAO
		Blowers	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Circula Syn
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Fans Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Fans - Plain Bearings (Oil)	Circulating Oil	PETRONAS Circula		PETRONAS Grease CaSx
Feed Preparation	Horizontal Ball Mill	Plumber Block Bearing	Grease	PETRONAS Grease LiX EP 2/380		PETRONAS Grease CaSx
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	PETRONAS Gear Syn PAO
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Hydraulic ESF
		Hydraulic System	Hydraulic Fluid	PETRONAS Hydraulic	PETRONAS Hydraulic HV	PETRONAS Grease LiX Syn 2/460
		Mill Trunion Bearing	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Circula Syn
		Mill Bearing	Circulating Oil	PETRONAS Circula		
	Fine Fuel Feeder	Open Gears	Grease			
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Bearings	Grease	PETRONAS Grease LiX EP 2/380		PETRONAS Grease LiX Syn 2/460
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Grease LiX Syn 2/100
		Fans	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	PETRONAS Grease LiX Syn 2/100
		Kiln Fuel Burner				PETRONAS Compressor A PAO
Clinker Production	Cyclone	Compressor	Air Compressor Oil	PETRONAS Compressor A M 2	PETRONAS Compressor A M 4	PETRONAS Grease LiX Syn 2/100
		Damper / Actuator valves	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Grease LiX Syn 2/100
		Fans Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	PETRONAS Grease LiX Syn 2/100
		Fans Bearings (Oil)	Circulating Oil	PETRONAS Circula		PETRONAS Grease LiX Syn 2/100
	Kiln	Separator Shaft Bearing	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Grease LiX Syn 2/100
		Auxiliary Diesel Engine	Engine Oil	PETRONAS Urania LD 7	PETRONAS Urania 5000E	PETRONAS Grease LiX Syn 2/100
		Auxiliary Reducers	Gear Oil	PETRONAS Grease LiX EP 2/380	PETRONAS Grease LiCa TMG	PETRONAS Grease LiX Syn 2/100
		Cooling System	Coolant Fluid	PETRONAS Paraflu 11	PETRONAS Paraflu Up Ready	
		Couplings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PE HS	
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Grease LiCa TMG	PETRONAS Grease LiX Syn 2/100
Packing Process	Grate Cooler	Girth Gear	Grease			
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Electric Motor Bearings (Oil)	Circulating Oil	PETRONAS Circula		PETRONAS Grease LiX Syn 2/100
		Support Roller Bearing	Circulating Oil	PETRONAS Circula		PETRONAS Grease LiX Syn 2/100
		Thrust Bearing	Circulating Oil	PETRONAS Circula		PETRONAS Grease LiX Syn 2/100
		Fans Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	PETRONAS Grease LiX Syn 2/100
	Bag Filler	Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP <sup>(2)</sup>	PETRONAS Gear FL	PETRONAS Grease LiX Syn 2/100
		Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	PETRONAS Grease LiX Syn 2/100
		Sprocket Bearings	Grease	PETRONAS Grease Li EP 2		PETRONAS Grease LiX Syn 2/100
		Blowers	Circulating Oil	PETRONAS Circula		PETRONAS Grease LiX Syn 2/100
		Blowers / Gears	Gear Oil	PETRONAS Grease LiX EP 2/380	PETRONAS Grease LiCa TMG	PETRONAS Grease LiX Syn 2/100
		Compressor	Air Compressor Oil	PETRONAS Compressor A M 2	PETRONAS Compressor A M 4	PETRONAS Grease LiX Syn 2/100

<sup>(1)</sup> Conveyors Only

<sup>(2)</sup> Jaw Crusher Only

<sup>(3)</sup> Premium Product