

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:



PETRONAS
Fluid Technology
Soluti>ns™

**TAKING YOU TO THE NEXT LEVEL
IN OPERATIONAL PERFORMANCE
STEEL INDUSTRY**

global.pli-petronas.com

PETRONAS Fluid Technology Soluti>ns™

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

With increasing pressure to improve productivity, cut costs and reduce the impact on the environment, the modern steel industry faces huge challenges – which is why the quality of the lubricants you use is critical. In a round-the-clock process that subjects machinery to intense heat and pressure, high quality lubricants can prevent unexpected and costly breakdowns, extend maintenance intervals and operating life of the equipment, to the benefit of your business.

As the preferred strategic partner and provider of lubrication solutions to major steel 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.

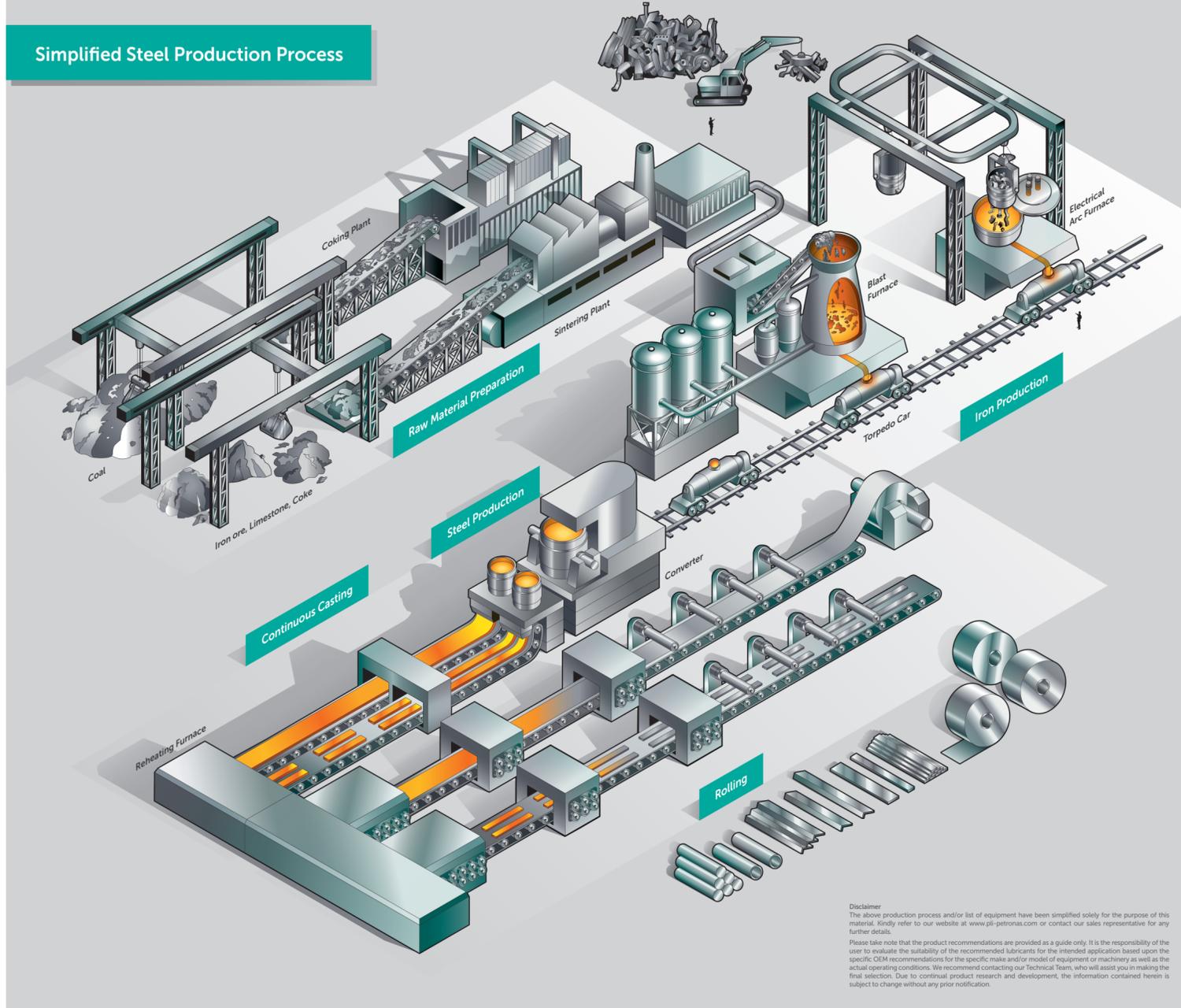


YOUR KEY TO MAXIMISING PERFORMANCE

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 steel production equipment. Choose the correct lubricant for equipment requirements and watch your productivity accelerate to the next level.



Simplified Steel Production Process



Disclaimer
The above production process and/or list of equipment have been simplified solely for the purpose of this material. Kindly refer to our website at www.pi-petronas.com or contact our sales representative for any further details.
Please take note that the product recommendations are provided as a guide only. It is the responsibility of the user to evaluate the suitability of the recommended lubricants for the intended application based upon the specific OEM recommendations for the specific make and/or model of equipment or machinery as well as the actual operating conditions. We recommend contacting our Technical Team, who will assist you in making the final selection. Due to continual product research and development, the information contained herein is subject to change without any prior notification.

PRIMARY PROCESS	EQUIPMENT	LUBRICATION PARTS	LUBRICANT	STANDARD	PREMIUM	SUPREME
Raw Materials Preparation	Breaker Screen	Bearings	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/220
		Hydraulic System	Hydraulic Fluid	PETRONAS Hydraulic	PETRONAS Hydraulic HV	PETRONAS Hydraulic ESF
	Conveyors	Bearings	Grease	PETRONAS Grease Li EP 2	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/220
		Coupling	Grease	PETRONAS Grease Li 2	PETRONAS Grease PE HS	
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
	Coke Oven	Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹⁾	PETRONAS Gear FL	PETRONAS Gear Syn PAO
		Butterfly / Actuator Valve	Grease	PETRONAS Grease LiCa GEP 2.5	PETRONAS Grease LIX MEP	PETRONAS Grease LiCa MG XHL
		Compressors	Compressor Oil	PETRONAS Compressor A M2	PETRONAS Compressor A M4	PETRONAS Compressor A Syn PAO
		Contact Bearings	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/220
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹⁾	PETRONAS Gear FL	PETRONAS Gear Syn PAG*
		Grease Points (Charge & Pusher Car)	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/460
	Cone / Gyratory / Impact / Jaw / Crushers	Hydraulic System	Hydraulic Fluid	PETRONAS Hydraulic HFC	PETRONAS Hydraulic FR	
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹⁾	PETRONAS Gear FL	PETRONAS Gear Syn PAO
Hydraulic System		Hydraulic Fluid	PETRONAS Hydraulic HV	PETRONAS Hydraulic HV	PETRONAS Hydraulic ESF	
Plain Bearings (Oil)		Gear Oil	PETRONAS Gear MEP ¹⁾	PETRONAS Gear FL	PETRONAS Gear Syn PAO	
Larry / Charge Car	Plain Bearings / Roller Bearings ¹⁾	Grease	PETRONAS Grease LIX EP 2/380		PETRONAS Grease LIX Syn 2/460	
	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 ¹⁾	PETRONAS Gear FL	PETRONAS Gear Syn PAO	
Mixer	Contact Bearings	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/220	
	Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU		
Quench Car	Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹⁾	PETRONAS Gear FL	PETRONAS Gear Syn PAO	
	Cooling System	Coolant Fluid	PETRONAS Parafu 11	PETRONAS Parafu Up Ready		
	Diesel Engine (Two Stroke)	Engine Oil	PETRONAS Genrail V	PETRONAS Genrail Syn VI		
	Hydraulic System	Hydraulic Fluid	PETRONAS Hydraulic HFC	PETRONAS Hydraulic FR		
	Journal Bearings	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/460	
Quenching Tower	Journal Bearings (Oil)	Circulating Oil	PETRONAS Circula	PETRONAS Circula Syn		
	Bearings	Grease	PETRONAS Grease Li EP 2	PETRONAS Grease LIX 2/170	PETRONAS Grease LIX Syn 2/220	
Screening Plant	Bearings (Oil)	Hydraulic Fluid	PETRONAS Hydraulic	PETRONAS Hydraulic HV	PETRONAS Hydraulic ESF	
	Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU		
Screening Plant	Bearings	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/220	
	Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU		

PRIMARY PROCESS	KEY EQUIPMENT	LUBRICATION PARTS	LUBRICANT	STANDARD	PREMIUM	SUPREME
Raw Materials Preparation	Stacker / Reclaimer	Bearings	Grease	PETRONAS Grease Li EP 2	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/220
		Cables	Grease	PETRONAS Grease LiCa GEP 2.5		
		Chains	Slideway Oil	PETRONAS Slideway		
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹⁾	PETRONAS Gear FL	PETRONAS Gear Syn PAO
	Sintering Plant	Contact Bearings	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/460
		Crusher and Vibrating Screens	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/460
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹⁾	PETRONAS Gear FL	PETRONAS Gear Syn PAG*
		Grease Points	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/460
Iron Production	Blast Furnace	Sintering Strand Grease	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/460
		Actuator Valves	Grease	PETRONAS Grease LiCa GEP 2.5	PETRONAS Grease LIX MEP	PETRONAS Grease LiCa MG XHL
		Blower (Compressor)	Compressor Oil	PETRONAS Compressor A M2	PETRONAS Compressor A M4	PETRONAS Compressor A Syn PAO
		Blower (Fan)	Grease	PETRONAS Grease PU	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/220 and 2/100
		Compressors (Tuyeres)	Compressor Oil	PETRONAS Compressor A M2	PETRONAS Compressor A M4	PETRONAS Compressor A Syn PAO
		Contact Bearings	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/460
		Hydraulic System	Hydraulic Fluid	PETRONAS Hydraulic HFC	PETRONAS Hydraulic FR	
		Tap Hole Drill	Hydraulic Fluid	PETRONAS Hydraulic HFC	PETRONAS Hydraulic FR	
		Turbine (Tuyeres)	Turbine Oil	PETRONAS Jenteram	PETRONAS Jenteram G	PETRONAS Jenteram Syn
		Mud Gun	Hydraulic Fluid	PETRONAS Hydraulic HFC	PETRONAS Hydraulic FR	
Steel Production	Electric Arc Furnace	Compressor (Air Brake)	Compressor Oil	PETRONAS Compressor A M2	PETRONAS Compressor A M4	PETRONAS Compressor A Syn PAO
		Hydraulic System	Hydraulic Fluid	PETRONAS Hydraulic HFC	PETRONAS Hydraulic FR	
		Open Gears and Plates	Grease		PETRONAS Grease LiCa TMG	
		Support Bearings	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/460
		Contact Bearings	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/460
	Torpedo Car	Cooling System	Coolant Fluid	PETRONAS Parafu 11	PETRONAS Parafu Up Ready	
		Diesel Engine (Two Stroke)	Engine Oil	PETRONAS Genrail V		PETRONAS Genrail Syn VI
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹⁾	PETRONAS Gear FL	PETRONAS Gear Syn PAG*
		Grease Points (Rails)	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/460
		Journal Bearings (Oil)	Circulating Oil	PETRONAS Circula	PETRONAS Circula Syn	
Converter / BOF	Rail Bearing Support	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/460	
	Contact Bearings	Grease		PETRONAS Grease CaSx		
	Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹⁾	PETRONAS Gear FL	PETRONAS Gear Syn PAG*	
	Movable Seal					
	Ladle	Compressor (Air Brake)	Compressor Oil	PETRONAS Compressor A M2	PETRONAS Compressor A M4	PETRONAS Compressor A Syn PAO
Hydraulic System		Hydraulic Fluid	PETRONAS Hydraulic HFC	PETRONAS Hydraulic FR		
Open Gears and Plates		Grease		PETRONAS Grease LiCa TMG		
Support Bearings		Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/460	
Continuous Casting		Continuous Casting Machine	Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹⁾	PETRONAS Gear FL
	Hydraulic System		Hydraulic Fluid	PETRONAS Hydraulic HFC	PETRONAS Hydraulic FR	
	Stewing Bearings		Grease			PETRONAS LIX Semi Syn SR
	Special Contact Bearing		Grease			PETRONAS Grease LIX Syn 2/460
	Rolling		Rolling Machine	Bearings (Furnace, Roller Table, Finishing Roller)	Grease	PETRONAS Grease LIX EP 2/380
Cooling Bed Support Bearings		Grease			PETRONAS Grease CaSx	
Electric Motor Bearings		Grease		PETRONAS Grease Li 2	PETRONAS Grease PU	
Gearbox / Reducer (Rollers, Roller Tables, Finishing Rollers, Winders)		Gear Oil		PETRONAS Gear MEP ¹⁾	PETRONAS Gear FL	PETRONAS Gear Syn PAO/PAG*
Hydraulic System (Rolling Gearbox / Reducer, Roller Table)		Hydraulic Fluid		PETRONAS Hydraulic HFC	PETRONAS Hydraulic FR	
Morgan Bearing	Circulating Oil	PETRONAS Circula Mill	PETRONAS Circula Mill NT			
Open Gears (Grease) - Winder	Grease		PETRONAS Grease LiCa TMG			

¹⁾ Jaw Crusher Only ²⁾ Premium Product * Special Precaution Needed