

SL123R UNITHERM

India's First and Only True Synthetic · High Load · High Temperature Grease to Prevent Failures in Gear Couplings and Heavy-Duty Drives

Gear Coupling & Heavy Drive Applications in an Integrated Steel Plant

A steel plant runs 50–100 gear couplings, mill spindles, and heavy drives — all under high load, oscillation, and temperature. Mill drive spindles on HSM/plate/bar mills, BF blower couplings, converter tilting drives, caster segment drives, and sinter machine drives combine high torque with continuous heat. Ordinary EP2 grease bleeds, oxidises, and leaves the tooth contact dry — fretting wear follows within months. SL123R UNITHERM holds film integrity under combined load and temperature.

Part A — Annual Cost of Gear Coupling & Drive Failures — 5 MTPA Plant

- **Coupling / spindle life:** ordinary EP2 grease delivers 1–2 years on mill spindles and drive couplings against 5+ year design life; failure mode is fretting wear in the tooth contact zone.
- **Coupling + spindle spares: ₹50 lakh–1 cr/year.** Mill spindles ₹5–20 lakh each; BF blower and converter drive couplings ₹3–8 lakh; cascade damage to gearbox output and motor shafts adds 2–3× cost.
- **Maintenance + alignment labour: ₹20–35 lakh/year.** Coupling change on mill drive train is 12–24 hr outage with laser alignment.
- **Drive train downtime: ₹3–8 cr/year — the dominant cost.** Mill spindle or BF blower coupling failure halts the production line; no warning signature on most plants.
- **Total: ₹4–10 cr/year per 5 MTPA plant.** Scales ~2× at 10 MTPA. A true synthetic high-load, high-temperature grease delivers 3–5× coupling life and addresses ₹1.5–5 cr/year.

Part B — Gear Coupling & Heavy Drive Applications

- **Hot Strip / Plate Mill** — work roll drive spindles; backup roll drive couplings; edger drive couplings; coiler drive couplings.
- **Bar / Rod / Section Mill** — stand drive spindles; twin-drive couplings; cooling bed drive couplings.
- **Cold Rolling Mill** — work roll drive couplings; tension reel drive couplings; processing line drive couplings.
- **Blast Furnace** — BF blower drive couplings; top gas booster fan couplings; charging system drive couplings.
- **Steel Melting Shop (BOF / LD / EAF)** — converter tilting drive couplings; EAF tilting cradle drives; ladle turret slew drive; sub-lance actuator drive couplings.
- **Continuous Caster** — segment drive couplings; withdrawal-straightener drive couplings; run-out table drive couplings.
- **Sinter Plant** — sinter machine main drive couplings; mixing drum drive couplings; ID fan drive couplings.
- **Coke Oven** — pusher car drive couplings; charging car drive couplings; quenching car drive couplings.
- **Galvanising / Coating Line** — pot roll drive couplings; looper drive couplings; CAL drive couplings.
- **Raw Material Handling** — stacker-reclaimer slew drive; bucket wheel drive couplings; wagon tippler drive couplings.
- **Captive Power Plant** — TG shaft coupling; BFP drive couplings; ID/FD/PA fan drive couplings; coal mill drive couplings.
- **Cranes & Heavy Handling** — ladle crane slew drives; EOT crane long-travel and cross-travel couplings.

Request a free 90-day plant trial — your reliability data will speak for itself.

Contact: technical@stanvac.com · www.stanvac.com