

LUBCON INDIA

PRESENCE IN

TYRE INDUSTRIES



Team LUBCON India



- Tyre curing is the process of applying pressure to Green tyre in a mold in order to give it final shape.
- There are 2 types of tires / molds Bias & Radial cured in Curing Press
- Bias tyre are cured in a mold with 2 pieces, where as Radial tyres are cured in Segment molds, having many parts fitted in a mold container

Curing Press



BIAS TYRE MOLD

- Mold is divided into two pieces upper mold & Lower mold. Molds of Bias tyre doesn't require lubrication. Commonly used for Cycles, Bikes, Auto rickshaws, Small cars, etc.



PCR (Passenger Car Radial) Tyre mold

- A series of molds are fitted in a container.
- The molds are known as Segment molds.
- In PCR the 'T' plate is lubricated sometimes
- Mold walls consist of a self lubricated plate called as 'DEVA' plate.



TBR (Truck Bus Radial) TYRES MOLD

- Series of molds fitted in mold called Segment molds container.
- The molds are without 'Deva' plates, hence require lubrication.
- Lubricant should withstand continues high temperature & high vibration for longer period.

Container holding molds

Molds to be lubricated





- Tyres are molded in curing press at the continuous temperature of 180°C. with high vibration.
- The tyre is cured in specific time called cycle.
- PCR cycle is of 15 Mins & TBR cycle is of 50 Mins.
- The mold is used for minimum 1500 cycles to 4500 cycles. Which is around a month.
- Lubricant should withstand high temperature & vibration for a month.
- It should not melt nor become hard.
- Lubricant should lubricate sliding surface between mold & container wall.

SEGMENT MOLD LUBRICATION

LUBCON TURMOTEMP MH 12



- Special grease containing PFPE base oil & Metal as thickener.
- Base oil viscosity of 500 cst.
- Maximum temperature range -30°C to 260°C.
- Can be used for upto 4000 cycles for Segment mold lubrication.
- Excellent Wear Protection.
- Excellent corrosion protection.





Company is a Global player in TYRE Manufacturing Industry.

APPLICATION:-

- Tyre curing press Radial Tyre.
- Segment Mold lubrication between Mold & Container.
- Continuous High temperature of 180°C with High Vibration of press
- Operated in 3 shifts



CUSTOMERS ISSUE

- Customer does not getting desired lubrication interval with Bechem VPT 64/2 grease getting dried out in 1500 cycles i.s. one month. Customer wants continues lubrication of two months up to 3500 cycles.
- Customer has earlier tried other competitors grease of same formulation but it was dried, which could have resulted in further abrasion on moulds.

APPLICATION KNOWLEDGE

- The grease is applied manually over segment mold & some of the lubricant is applied to Wear plate. The type of mold normally runs for 1 month, but most of the time if product type changes the mold is removed even at lesser period.

Segment Molud



Wear Plate

Fig. Segment Mould



LUBCON RECOMMENDATION

- LUBCON (Germany) Make TURMOTEMP MH 12
- TURMOTEMP MH 12 is a special grease for tyre moulds based on a perfluorinated oils (PFPE) and a special metal soap. Due to this we are able to combine the positive properties of the chemically and thermally very stable base oil with the excellent properties of the metal soap.
- The dedicated application area for TURMOTEMP MH 12 is the lubrication of tyre moulds. By using TURMOTEMP MH 12 instead of conventional greases, the number of cycles will explicitly rise.



WHY' LUBCON TURMOTEMP MH 12 GREASE

Advantages:

- Exceptional stability at high temperatures
- Excellent resistance to water and chemicals
- Non-flammable
- Full compatibility with plastics and elastomers
- Very long life, 4000 cycles.
- Very low friction, excellent anti wear property.
- Good viscosity-temperature behavior.

Lubrication Procedure TURMOTEMP MH 12

- Molds of Container No BT-08/06 Cleaned & Greased with Lubcon Make Grease Trial conducted for two months and 4000 cycles successfully.

Turmotemp MH 12 Application

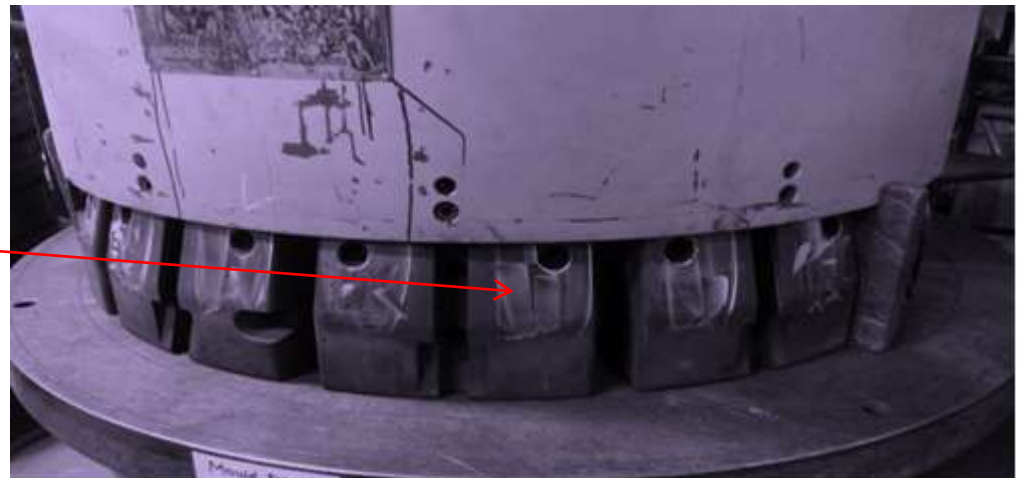


Fig. Grease Application

Observation Result of TURMOTEMP MH 12

- The mold was used for 4050 cycles because of change in type.



Fig. Grease Application

Grease on mold surface still looks in good condition / observed clearly. No colour change.

Observation Result of Bechem VPT 64/2

- The mold was used for same cycles as LUBCON Grease.



Fig. Grease Application

Grease on mold surface looks melted and disappeared.



Accepted Benefits & Cost Saving

- ✓ Direct cost saving as Basic rate of Lubcon grease is lesser than competitor.
- ✓ Identical performance of lubricant on Segment Mold
- ✓ Excellent protection due to Special Metal soap Thickened & 100 % Synthetic PFPE Base Oil.
- ✓ No Base Oil evaporation.
- ✓ Longer service & storage Life.
- ✓ Hence, the product performance is at par with Existing lubricant.

COST COMPARISON



Techno - commercial Comparison / Justification.

No.	Parameters	Bechem	Lubcon	Savings With LUBCON Grease
1	Cycles	1500	4000	Last 2500 cycles more
2	Lube-interval	1 Month	2 Month	Extended re-lube interval by month
3	Maintenace downtime/month	8hrs	4hrs	Reduce down time by 4Hrs/month
4	Maintenace downtime/year	96hrs	48Hrs	50 % saving in down time, by 48Hrs/year
5	Grease consumption/month	15kg	10kg	Reduced grease consumption 5kg/month
6	Grease consumption/year	180kg	120kg	30% saving in consumption, 60kg/year
7	Draying of grease	Yes	No	No dryness in grease upto 4000 cycles.
8	Wear/Corrosin on mould	Yes	No	No corrosion or ear of mould with lubcon
9	Cost of grease	High	Less	Direct cost saving with LUBON grease.



- ❖ Ceat Tyres :- Vadodara.
- ❖ J.K.Tyres :- Mysore, Karnataka,
:- Kanchipuram & Nammakal, Tamil Nadu.
- ❖ Continental (CIL) tyres :- Meerut, UP.
- ❖ Michelin Tyres :- Chennai.
- ❖ Michigan Rubber India Ltd :- Betul, Madhyapradesh.
- ❖ ATC Alliance Tyres :- Bharuch, Gujarat.(Project)
:- Tirunelveli, Tamil Nadu
- ❖ Rubber King Tyres Ltd :- Ahmedabad.
- ❖ Apollo Tyres :- Vadodara, Gujarat, Chennai & Aluva,
Kerala.



- ❖ Falcon Tyres :- Mysore, Karnataka.
- ❖ Bridgestone Tyres :- Pune, Maharashtra,
:- Pithampur, Madhyapradesh.
:- Dehradun, Uttarakhand.
- ❖ Birla Tyres :- Laksar, Uttarakhand.
- ❖ Maxxis Tyres (Project) :- Sanand, Gujarat
- ❖ BKT Tyres :- Bhuj, Gujarat.
- ❖ MRF Tyres :- Kottayam, Kerala,
:- Pondichery, Perambalu, Chennai.

Thank you very much for your Support



LUBCON Lubrication India Private Limited

(A Wholly Owned Subsidiary of Lubricant Consult GmbH, Germany)

No.102/25, Yellupura Village, Kasaba Hobli,
Near KSSIDC Industrial Area, Doddaballapura,
Taluk, Bengaluru – 561 203.

Phone: +91 94490 27975

Email: office.india@lubconasia.com

www.lubcon.com

