

# LHP UPDATE

Newsletter

Issue 15 July 2013



Energy efficient



Tips to right selection of IE2 & IE3 Motors

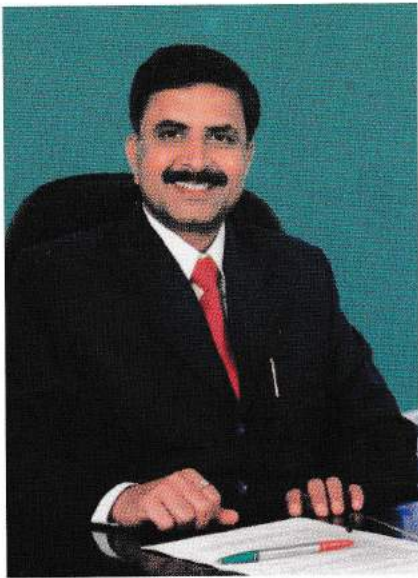


Enviro-friendly

**Lhp**  
MOTORS DRIVES  
*Driven by Commitment*

**supremo**  
IE MOTORS





# The Mentor Speaks

Dear All,

During the previous financial year, as usual, we remained on the forefront of technology development. The year witnessed the development of a full range of **IE2 & IE3 motors** and our range of Flame-proof motors received **CE-ATEX certification**. Besides these, several new special purpose motors were developed for the markets in India and Europe, proving our capability as a drive solutions provider.

LHP, as usual, recorded growth in its turnover during FY 2012-13 and crossed the mark of ₹2000 million. Though it was a little difficult year in terms of

profitability due to a steep rise in raw material prices, we were able to keep our overheads and manufacturing costs well within control by opting for automation and use of modern manufacturing techniques.

Looking at the encouraging response to our newly introduced range of IE motors and Flame-proof motors, we decided to venture into the global market with a well-defined strategy. We announced our intention through our presence at **Hannover Messe, Germany**. As per our expectations, this generated an overwhelming response from companies from different parts of the world and we are confident of spreading our wings and will soon become a recognisable global player.

We are confident that we will always receive encouraging support from all of you - customers, vendors, financiers, employees and well-wishers while we are marching towards more ambitious goals.

Sincerely yours,

**Sharadkrishna Thakre**

Managing Director

## Unveiling new company profile



We have recently published an updated version of our company profile. To receive your free copy, contact: [mac.intyne@lhpmotor.com](mailto:mac.intyne@lhpmotor.com)

## Invitation

Visit us at



**8th International Industrial Automation Exhibition 2013**

**Stall No. A 21**  
Bombay Exhibition Centre,  
Goregaon (East), Mumbai  
23-26 September, 2013





# Hannover Messe 2013

*In the future, exports will be a major part of our growth strategy and focussed efforts are being made in this direction. As a first step, LHP marked its presence at Hannover Messe 2013, Germany.*

Hannover Messe in Germany is a window to the world for engineering products. In an ambitious plan to go global, as a first step, LHP marked its presence at Hannover Messe 2013 held from 08-12 April, 2013. Our advanced range of standard induction motors, flame-proof motors, IE2 & IE3 motors, roller table motors and geared motors was showcased in the exhibition. The theme of LHP for this exhibition was '**Partner for Prosperity**' which aptly narrated the benefits of associating with LHP either as a customer or as a sales channel partner.

An overwhelming response received from competent organisations and dealers world over either for procuring our range of motors or representing LHP in respective countries. This response certainly attributes to the product quality, large manufacturing capacity, world-class manufacturing set up and excellent brand equity of LHP.

As you know, we are already exporting our motors to a few renowned companies in various parts of the world. Our products are being accepted very well and we are consistently developing and supplying different types of motors to these companies. However, in the future, exports will be a major part of our growth strategy and focussed efforts are being made in this direction.

We are confident that very soon we will be in a position to establish a global network of sales channel partners and will become a recognisable player in the global market.

**Partner for Prosperity**

The team LHP which was present at the stall included Sharadkrishna Thakre (Managing Director), Aditya Thakre (Director-Technical), Deepak Desai (President-Design and Development) and Suhas Jain (General Manager-Electronics and Automation).

We sincerely thank all our customers in India who encouraged us to develop a systematic strategy for exports and also cheered us by visiting our stall at Hannover. We are also thankful to all international visitors for their keen interest in associating with LHP.





# Get the best efficiency and higher energy savings

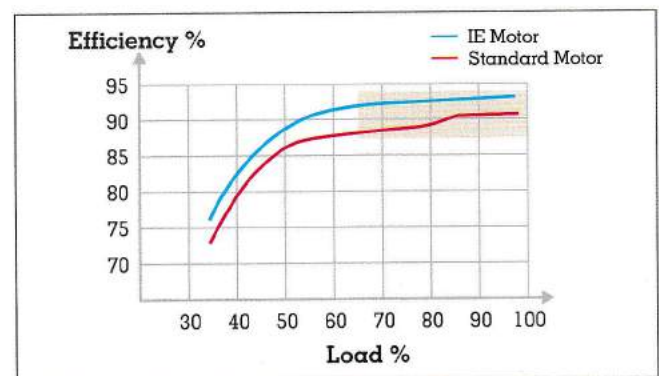
## Tips to right selection of IE2 & IE3 motors

For optimising energy consumption and achieving higher energy savings, it is important to understand the prime considerations for the selection and usage of EE motors as outlined below.

- Motor size ➤ Operating speed ➤ Operating voltage ➤ System efficiency

### Motor size

In the case of an IE motor, the load factor should be between 65% and 100% in order to receive the full benefit of energy saving. This is because the efficiency curve of a typical standard motor drops considerably when the load factor is reduced. However, in the case of an IE motor, it remains almost flat and hence the drop in the efficiency is also very marginal. Thus, a significant energy saving can be achieved by reducing the load factor and yet higher efficiency is ensured. This is illustrated in the adjacent graph.



### System efficiency improvement

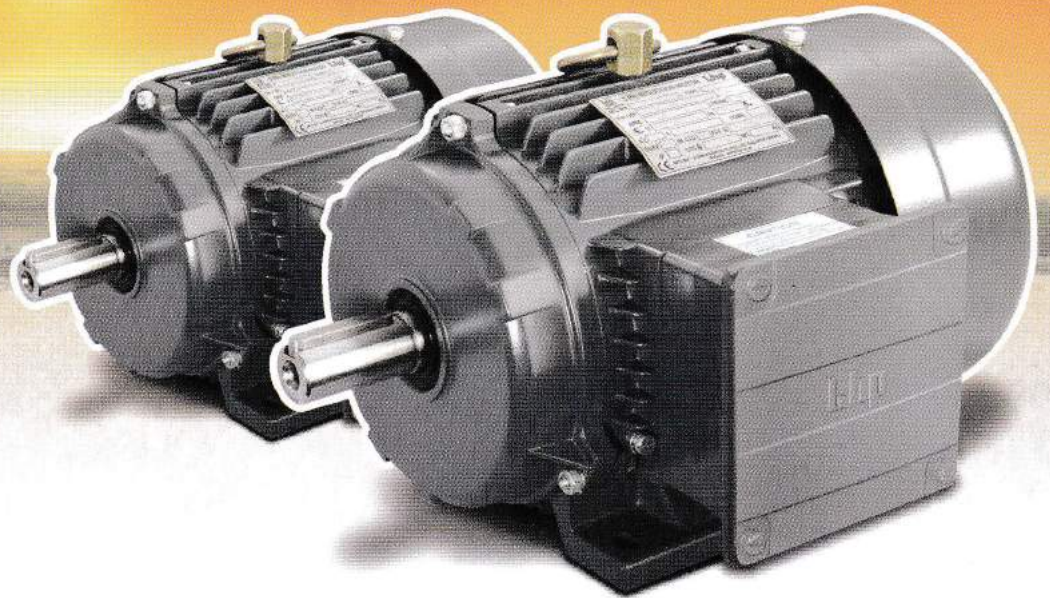
#### Efficiency levels when an ordinary motor is used

Element	Efficiency %
Transformer	98
Drive	98
Motor	86
Gear	75
Power Transmission	80
Load	95
Overall	47.07

#### Change in efficiencies when this is replaced with an EE Motor

Element	Efficiency %
Transformer	98
Drive	98
Motor	92
Gear	75
Power Transmission	80
Load	95
Overall	50.36





### Operating speed

The replacement EE motor should have the same full load speed as the old motor, particularly in case of centrifugal load application (fans and pumps).

Induction motors have operating speed that is slightly lower than their synchronous speed. For example, a 4 pole 50Hz motor has a synchronous speed of 1500rpm. Its operating speed at full load will typically be 1440rpm. This operating speed is stamped on the name-plate of the motor.

Every pump and fan has a design speed. Centrifugal loads are sensitive to speed. Even a slight increase in speed significantly affects the pump or fan operation. It leads to increased flow, reduced efficiency and increased power consumption.

### Operating voltage

Motors are capable of operating within a range of + or - 10% of rated Volts. For example, a 415 Volts motor can operate between 373 and 457 Volts. However, it gives the best efficiency at rated Volts and its efficiency will fall with an increase as well as decrease in the voltage. Hence, it is necessary to adjust the tap-changer if any, to rated Volts.

### System efficiency

A drive system typically consists of a transformer, drive (VFD), gear unit, power transmission elements and load. The overall efficiency of the system is a product of individual component efficiencies. Mechanical efficiencies also matter. Let us have a look at the efficiency levels of all these components and the change in them after using energy efficient motors and mechanical systems.

**Further change in efficiencies after replacing the gear unit.  
Say a worm gear is replaced with a helical gear.**

Element	Efficiency %
Transformer	98
Drive	98
Motor	92
Gear	90
Power Transmission	80
Load	95
Overall	60.43

**By adopting these changes, we will be able to reduce overall HP requirement**

System	Original	1	2
Load HP	50	50	50
Motor	Std	EE	EE
Gear	Worm	Worm	Helical
System efficiency	47.07	50.36	60.43
Motor HP	50/0.529	50/0.567	50/0.679
	95	88	74



# LHP Flame-proof motors become a star attraction at Mining and Machinery Exhibition, Kolkata & Chemtech 2013, Mumbai

## Mining and Machinery Exhibition

LHP participated in the 11th International Mining and Machinery Exhibition which was held at the famous Salt Lake Stadium, Kolkata from 5-8 December, 2012. The event was organised by Confederation of Indian Industries (CII).

We displayed our range of Flame-proof motors from 0.12kW to 200kW. This range has all statutory approvals and international certification of CE-ATEX proving its highest quality, reliability and safety. Looking at the explosive environment prevailing in coal mines, safety is a prime concern and it is essential to use Flame-proof motors of highest quality and reliability to avoid any possible explosion/accident. The LHP range of Flame-proof motors perfectly fits the norms and the motors are also offered at most competitive prices. This attracted several mining experts in India and world over to LHP stall and our Flame-proof motors became a star attraction. Our team of experts on Flame-proof motors and their

applications in mining was led by Suresh Ozarde. These experts competently explained the significance of reliable Flame-proof motors having CE-ATEX certification and competency coupled with experience of LHP in this field.

We envisage good prospects for our range of Flame-proof motors in the global market after an encouraging response through this exhibition particularly from mining engineers from India, UK and Australia.



## Chemtech 2013

LHP participated in this year's Chemtech World Expo 2013 at the Bombay Exhibition Centre held from 15-18 January, 2013.

Our stall was visited by several eminent decision makers from chemical and pharmaceutical industries. Among the visitors were delegates from companies in India and abroad. Our focus area for this exhibition was Flame-proof motors as they play a key role in these industries. The event



provided an opportunity to our team of experts to interact with a wide cross-section of buyers from various countries.

LHP is already a strong player in chemical, pharmaceutical and petrochemical fields with a large number of buyers and installations across India. The participation further resulted in generating phenomenal response and firm leads for our entire range of motors even from overseas markets.





## Executed prestigious orders of Flame-proof (Explosion-proof) motors with EIL approval

Having obtained approval from Engineers India Ltd. (EIL), LHP has now established its stature in the oil, gas and petroleum sectors by successfully executing prestigious orders from all major pump manufacturers in India who cater to the oil, gas and petroleum sectors.

We have been supplying them Flame-proof motors Ex(d) from 63 to 315 frame sizes for Gas Group IIA, IIB, IIC as per new IS/IEC/60079-1:2007 standard and Non-sparking motors Ex(n) up to 355L frame for area classification Zone 2.



Every motor supplied conforms to stringent quality requirements and adheres to the technical specifications of Engineers India Ltd. EIL is a Government of India undertaking and Asia's leading design, engineering and turnkey contracting company.

It provides a complete range of project services to meet specific requirements of clients in petroleum refining, petrochemical pipelines, off-shore/on-shore oil and gas terminals/storage, mining, metallurgy and infrastructure projects.

### Dall Tech Expo 2012

We participated in the Dall Tech Expo 2012 held at Dall Millers Association Building, Gulbarga. It was a one-day event coinciding with the meeting of the members.

LHP displayed Standard Motors, Geared Motors and VFDs and the Dall Millers showed great interest in our product range. They were impressed to understand

the role of LHP motors and drives in controlling the process parameters, enhancing their plant efficiency, reducing energy consumption and ensuring more profitable operations of a dall mill.

We appreciate their response and also the efforts of our Sales Channel Partner, Ramesh Kumar for making the participation a great success.



# 'Develop ability to take right decisions'

Sharadkrishna Thakre addresses young, aspiring entrepreneurs in a national seminar.

A national seminar on 'Entrepreneurial Development in Emerging Economies - Issues & Challenges' was organised at Sangameshwar College, Solapur on January 5, 2013. Eminent delegates and scholars from all over India attended this seminar. Our Managing Director, Mr. Sharadkrishna Thakre was invited as the chief guest to grace the august valedictory function. Mr. Thakre, in his inspiring speech, highlighted the basic attributes that an entrepreneur should possess to tackle political and financial challenges that he will face during the course of managing a manufacturing unit despite hard work and an iron will. He cited his real life experiences as a testimony. The audience gave him a standing ovation and the applause reverberated as he concluded the speech.



## Who's who?



Deepak Desai

Name of team member	: Deepak Desai
Age	: 62 years
Family status (Married to)	: Married to Ujwala
Names of children	: Sharvani (daughter), Niranjana (son)
Qualifications / experience	: B.E. (Electrical) 37 years in Design at various positions and one year as Unit Chief of LV Rotating Machines
Date of joining LHP	: October 2012
Responsibility shouldered in LHP	: President (Design and Development)
Special achievements	: Design Centraliser Application
Hobby	: Carpentry, gardening
Favourite snack	: Dal Bati (Dal Bafia)
Favourite celebrity	: Bal Muralikrishna
Favourite holiday destination	: Seashore and jungle resorts
Strength	: Completely committed to the success of the organisation
Weakness	: Strong, compulsive need to do things quickly and remove them from my 'to do' list
Message to colleagues	: Contribute your unique talent and passion to accomplish organisational goals

Corporate office & manufacturing plant

National sales & marketing office



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