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Once upon a time there was a buyer at a large company who had to purchase a large three-phase induction motor with a power rating of 1 MW that was to be used in a big machine. As usual, he invited suppliers to submit bids. Before drafting the tender documents he spoke to the head engineer and technicians at the relevant technical department about the expected number of operating hours per year, the machine's level of utilization and its load profile. Talks then began with potential suppliers about what sort of efficiencies could be achieved.

As is normal, the buyer and supplier agreed on a penalty clause that would allow a price reduction to be imposed should the motor fall short of the efficiency level agreed in the sales contract. Equally, in the event of the motor exceeding specifications, the supplier would receive a bonus.

Once upon another time there was another buyer at another large company – or perhaps it was even the same buyer at the same company. This buyer needed to buy 1000 small three-phase induction motors each with a 1 kW rating that were to be built into the numerous small machines at his large company. He put out requests for quotes, specifying the voltage, design and con-figuration and the number of poles, and then placed his order with the cheapest supplier. The word 'efficiency' was nowhere to be seen: neither in the request for quotes, nor on the motor's rating plates. Perhaps it was mentioned in the manufacturer's catalogue, but, as so often, it remained unread.

The sad thing about these two fairy tales is that they aren't actually fictional at all, but a fair description of current industrial practice. Had we swapped the two stories, then we would at least have avoided the most absurd aspect of the situation: the fact that large motors are inherently far more efficient than small ones.



Saving energy with high efficiency motors

Written by Administrator

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