

CREATOR Project A1: Induction Motor

### Stator and Rotor Iron Technical Specifications: Typical Values M800-50A

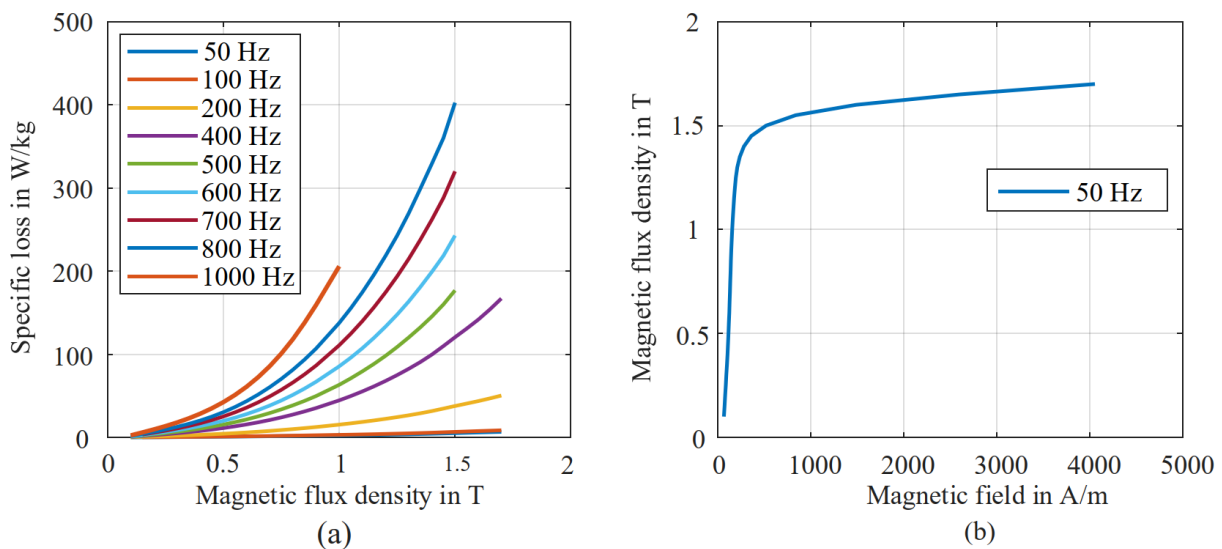
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The subsequent data is referenced from [1]. This table is also provided as a .csv file in the same directory.

Parameter	Value
Steel Grade	M800-50A
Yield Strength	340 Mpa
Yield Strength (0.2%)	300Mpa
Elongation	35 %
Hardness HV5	130
Magnetic Polarization at 50Hz, H=2500A/m	1.64 T
Magnetic Polarization at 50Hz, H=5000A/m	1.73 T
Magnetic Polarization at 50Hz, H=10000A/m	1.84 T
Relative Permeability at 1.5 T	2300
Density	7.8 g/cm <sup>3</sup>
Specific Electrical Resistance	28.2 $\mu\Omega\text{cm}$
Thermal Conductivity	42 W/mK

Fig.1 illustrates the B-H or magnetization curve for the stator and rotor iron steel sheets. It also shows the specific iron losses at different frequencies for this material.



**Fig. 1. IM stator and rotor iron sheet material properties.**

[1] “DS Isovac© 800-50 A DATASHEET,” Voestalpine. [Online]. Available: [https://www.voestalpine.com/division\\_stahl/content/download/32775/347255/file/DB\\_isovac\\_800-50A\\_E\\_131015.pdf](https://www.voestalpine.com/division_stahl/content/download/32775/347255/file/DB_isovac_800-50A_E_131015.pdf)