



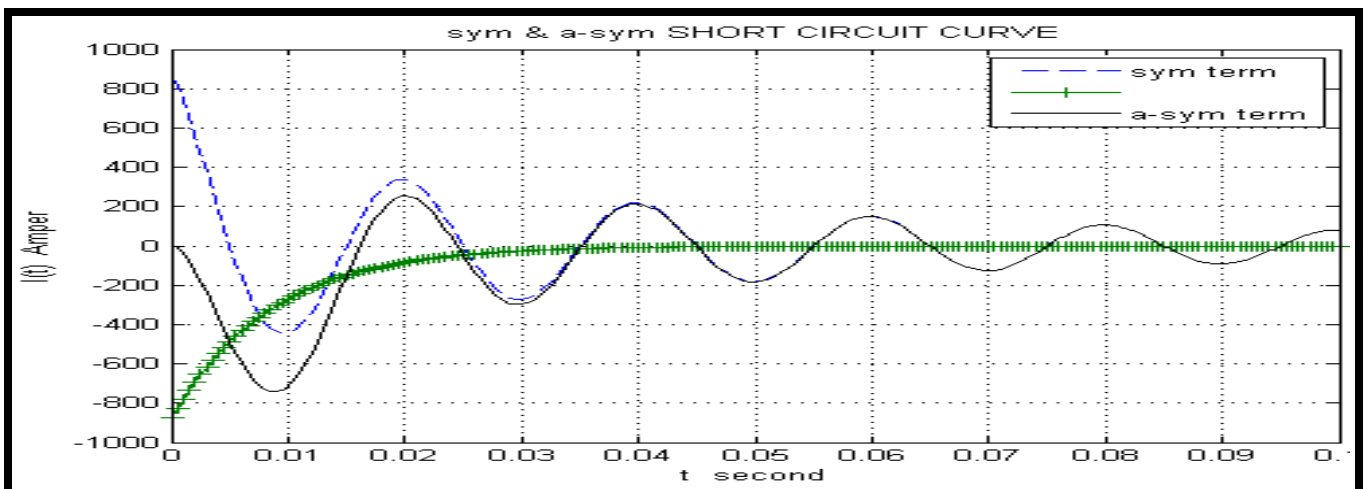
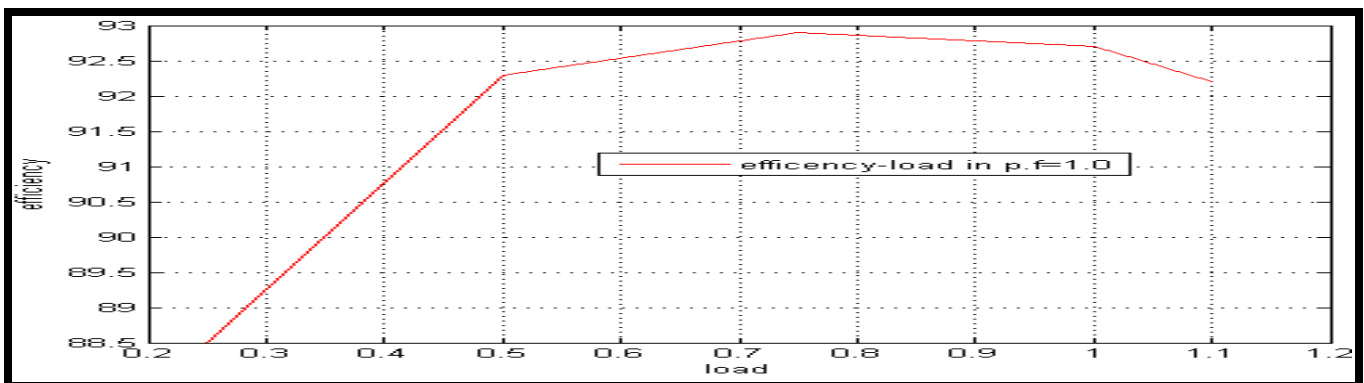
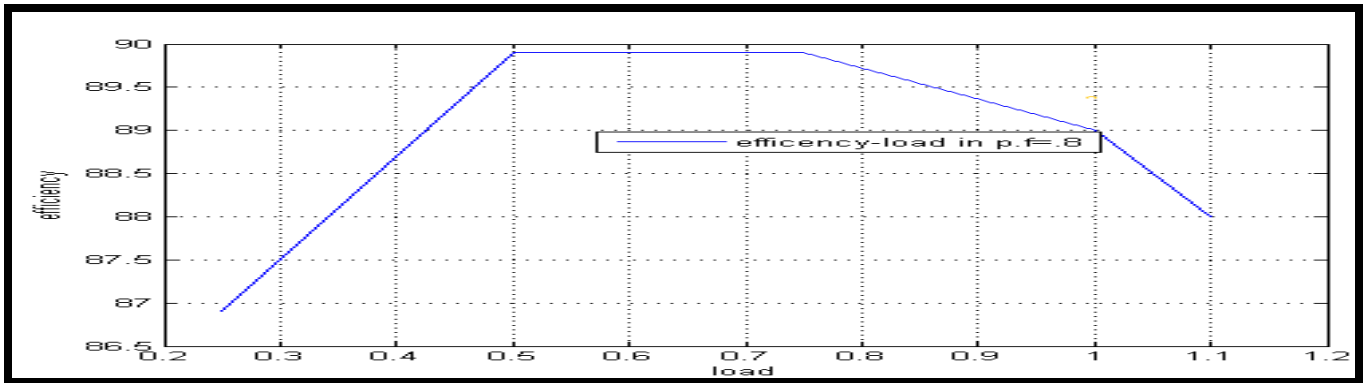
## Technical Datasheet for Mahniroo Alternators DSG29 L1-4

### Generator data

|                                 |                                                  |                                                  |                         |                        |           |                 |
|---------------------------------|--------------------------------------------------|--------------------------------------------------|-------------------------|------------------------|-----------|-----------------|
| Generator :                     | DSG29 L1-4                                       | poles:                                           | 4                       | Standard:              | IEC60034  |                 |
| Rated power :                   | 44 KVA                                           | Rated Current:                                   | 63.5 A                  | Rated Voltage:         | 400 V     |                 |
| Active Power :                  | 35 Kwatt                                         | Reactive Power:                                  | 26.4 kvar               | Power Factor:          | 0.8       |                 |
| Speed:                          | 1500 rpm                                         | Freq:                                            | 50 HZ                   | Mech Power:            | 123 kwatt |                 |
| Voltage range/ferquency range : |                                                  | Zone A according IEC 60034-1 (dU=+/-5%,df=+/-2%) |                         |                        |           |                 |
| Insulation class                |                                                  | stator: Class H                                  | Rotor: Class H          | Temperature Rise: H    |           |                 |
| Winding Pitch:                  |                                                  | 2/3                                              |                         |                        |           |                 |
| Ambient Temperature :           |                                                  | 40°C                                             |                         | Site altitude:         | 1000 m    | Enclosure: IP23 |
| Enviroment: Standard Enviroment |                                                  |                                                  |                         |                        |           |                 |
| Cooling:                        | 1C 01-Open-circuit ventilation                   |                                                  | Cooling Air Vol:        | 35 m <sup>3</sup> /min |           |                 |
| Weight:                         | 240 Kg                                           | Momment of Inertia:                              | 0.4 Kg/m <sup>2</sup>   |                        |           |                 |
| Temperature Air inlet           | 40°C                                             |                                                  | Cooling Water Quantity: | n/a                    |           |                 |
| Losses(enviroment):             | 4.5 Kwatt                                        | Losses(cooling):                                 | n/a                     |                        |           |                 |
| Wires:                          | 4 terminals, starpoint connected in terminal box |                                                  |                         | [                      | Single    | yes             |
| Voltage regulator:              | Cosimat C /MN                                    |                                                  | Operation mode          |                        | Parallel  | yes             |

### Electrical Data (aac,IEC)

|                                               |       |                              |       |           |          |
|-----------------------------------------------|-------|------------------------------|-------|-----------|----------|
| Efficiencies                                  | 110%  | 100%                         | 75%   | 50%       | 25%      |
| P.F 0.8                                       | 88    | 89                           | 89.9  | 89.9      | 86.9     |
| P.F 1.0                                       | 92.2  | 92.7                         | 92.9  | 92.3      | 88.5     |
| Reactances (p.u.) and time constants (second) |       |                              |       |           |          |
| $X_d^{\text{saturated}}$                      | 1.99  | $X_q^{\text{saturated}}$     | 0.92  | $T_{d0'}$ | 0.56 s   |
| $X_{d'}^{\text{saturated}}$                   | 0.156 | $X_{q''}^{\text{saturated}}$ | 0.119 | $T_{d'}$  | 0.04 s   |
| $X_{d''}^{\text{saturated}}$                  | 0.094 | $X_0^{\text{saturated}}$     | 0.039 | $T_{d''}$ | 0.0036 s |
| $X_2^{\text{saturated}}$                      | 0.106 |                              |       | $T_a$     | 0.0085 s |
| $X_{1s}^{\text{saturated}}$                   | n.a.  |                              |       | $T_{q'}$  | 0.0044 s |





General Arrangement for Mahniroo  
Alternators DSG29 L1-4

