

W1.40**Drying in Mills
Quantity of Hot Gases Required**

| sr no | title | symbol | unit | equatio | result |
|-------|---|--------|----------|---------------|---------|
| | material to be dried | | | raw materials | |
| | rate dried material | T | tph | | 100 |
| | moisture wet material | w | % | | 6 |
| | moisture in dried material | wr | % | | 0.5 |
| | quantity of water evaporated | Wa | kg/hr | | 5500 |
| | heat reqd for drying w % moisture in feed (see W1.38) | | kcal/kg | | 1350 |
| | heat required for Wa kg/hr | | kcal/hr | | 7425000 |
| | power drawn by mill | | kw | | 1800 |
| | heat of grinding available | | kcal/hr | | 1238400 |
| | heat to be supplied by hot gases | | kcal/hr | | 6186600 |
| | temp. Hot gas | | o c | | 270 |
| | sp.heat | | kcal/nm3 | | 0.315 |
| | quantity of hot gas | | nm3/hr | | |
| | temp. of gas after drying | | oc | | 90 |
| | sp.heat of cold gas | | | | 0.312 |
| | heat available fom 1 nm3 gas | | | | 56.97 |
| | quantity of hot gas to be supplied | | nm3/hr | | 108594 |
