

# ACMA Excellence Awards

## Excellence in Manufacturing

### Definitions and formulas

$$x^2 + \frac{b}{a}x + \left(\frac{b}{2a}\right)^2 = -\frac{c}{a} + \left(\frac{b}{2a}\right)^2$$

$$\left(x + \frac{b}{2a}\right)^2 = -\frac{c}{a} + \frac{b^2}{4a^2}$$

$$\left(x + \frac{b}{2a}\right)^2 = \frac{b^2 - 4ac}{4a^2}$$

**ACMA**

2020

## Definitions / formulas for Manufacturing Excellence Category

1. Sales ( Total :Domestic + Export + Aftermarket ) ( UOM= Rs. Cr. ) **Total Sales in Rs. Cr. In that year**

2. Customer assessment / Feedback score ( UOM= % ) **Score out of 100 %**

3. Value addition to employee cost ( UOM = % )

**( Sales –Variable Cost ) for that year**

= -----

**All Employee Cost ( CTC ) for that year**

4. Customer complaints ( UOM= Nos ) **Total customer complaints received from all customers in that year**

5. Productivity (units/man/year) ( UOM= Nos )

**Total production Qty in that year**

= -----

**Total Number of production people in that year**

6. ITR (RM+WIP+FG) ( UOM = Nos.)

**Material cost of sales for the month x 12 in Rs.**

**ITR = -----**

**(RM + WIP + FG ) in Rs. On 1<sup>st</sup> day of the month**

**Data expected for each year ( You may consider March Material cost of sales and 1<sup>st</sup> April inventory ).**

**Use same formula for all years.**

## Definitions / formulas for Manufacturing Excellence Category Contd...

7. Customer returns ( UOM = PPM )

$$\frac{\text{Total products returned from all customers in that year}}{\text{Total product qty shipped in that year}} \times 10^6$$

8. Employee satisfaction score ( UOM = % ) Total Employee satisfaction score for that year out of 100 %

9. Energy cost as a % of sales ( UOM = % )

$$\frac{\text{Total energy cost in Rs. Cr in that year}}{\text{Total sales in Rs. Cr . that year}} \times 100$$

10. No of suggestions implemented/ Employee/ Year ( UOM = Nos. )

$$\frac{\text{Total number of suggestions implemented in that year}}{\text{Total number of employees in that year}}$$

11. Value addition to net sales ( UOM = % )

$$\frac{\text{Net Sales – Variable Cost}}{\text{Net Sales}} \times 100$$

12. Warranty ( UOM = PPM )

$$\frac{\text{Total products returned under warranty in that year}}{\text{Total product shipped qty in that year}} \times 10^6$$

**Definitions / formulas for Manufacturing Excellence Category  
Contd...**

13. Customer line stoppages ( UOM = Hrs ) **Customer lines stopped due your insufficient supply OR Quality problems.**

14. Delivery Performance( UOM = % ) **Delivery performance out of 100 %**

15. Inhouse Rejection ( UOM= PPM )

**Total rejected qty in that year**

**= -----x 10<sup>6</sup>**

**Total qty produced in that year**

16. No of Customer awards ( UOM = Nos.) **Number of awards received from all customers in that year**

17. 5 S average score ( UOM = % ) **Average 5 S score for that year**

18. Accidents per year ( UOM = Nos ) **Total number of accidents in that year**

19. Cost of poor quality as a % of sales ( UOM= % )

**Total cost of (Scrap + Rework+ Re-Inspection + Warranty )  
for that year**

**= -----x 10<sup>6</sup>**

**Total Sales in that year**

20. % of Waste water treated inside the plant ( UOM= %)

**Total waste water treated inside plant in that year**

**=----- x100**

**Total waste water generated in that year**

**Definitions / formulas for Manufacturing Excellence Category**  
**Contd...**

21. CSR - Amount spent as % sales ( UOM = % )

$$\frac{\text{Total amount spend on CSR in that year}}{\text{Total sales in that year}} \times 100$$

22. No of QC circles ( UOM = Nos. ) **Total number of QC Circles active in that year**

23. Machine breakdowns as % of total available time (UOM = % )

$$\frac{\text{Total machine breakdown hours in that year}}{\text{Total available machine hours in that year}} \times 100$$

24. Export Sales as % of Total Sales ( UOM = % )

$$\frac{\text{Total Export Sales in that year}}{\text{Total sales in that year}} \times 100$$

25. Training Manhours/ man/ Year ( UOM = Hrs )

**Total training man-hours for all employees in that year**

$$\frac{\text{Total training man-hours for all employees in that year}}{\text{Total number of employees in that year}}$$