

"TM Series", Load Cells for Measuring Tension*

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1 Introduction

In the steel manufacturing process, the tension of flat-

type is shown in **Photo 1**. The outside dimensions of the TM series are shown in **Fig. 1** and the specifications of the TM series are shown in **Table 1**.

rolled steel products is controlled in order to stabilize the shape quality of plates and sheets. A load cell is installed in the lower part of a roll bearing to measure this tension. Tension meters are divided into (1) those directly connected to a load cell and (2) those that are a combination of a lever and a load cell. Both types are

4 Inclined Load Characteristics

In a tension meter, tension acting on a strip is determined by a geometric computer from the magnitude and direction of the force acting on a load.

Table 1 Epecification of TM series

| Model | TM-H-10 | TM-H-20 | TM-V-20 | TM-V-50 | TM-V-100 |
|--------------|------------|---------|----------|---------|----------|
| Rated load | 9.8 kN | 19.6 kN | 19.6 kN | 49 kN | 98 kN |
| Rated output | 0.8 mV/V | | 1.0 mV/V | | |
| Nonlinearity | ±0.2% R.O. | | | | |
| Hysteresis | ±0.2% R.O. | | | | |