

KES

Body Block Inertia Moment Test

KES T – I900

(EST.) 1993 – 12 – 05

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1. Scope of Application

This standard shall be applied for body clock or tuffy dummy made by the method of SAE J 944A.

2. Purpose

This standard is to measure the inertia moment of body block (Tuffy dummy) used for steering impact test.

3. Evaluation Standard

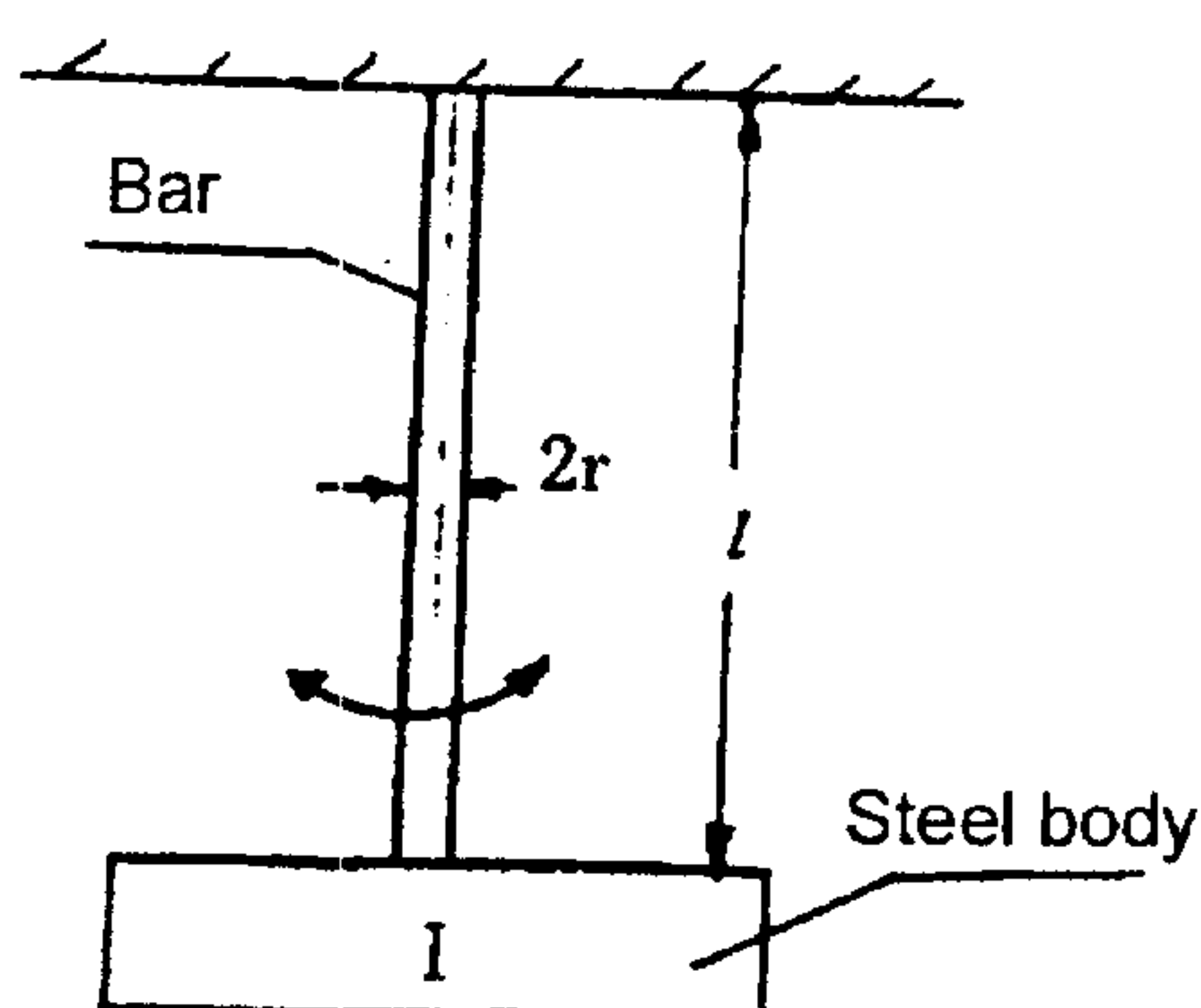
The inertia moment around the horizontal axis(Up-down direction) through the weight center of body block shall be $20 \pm 2 \text{ in} \cdot \text{lb} \cdot \text{sec}^2$ ($23 \pm 2.3 \text{ cm} \cdot \text{kg} \cdot \text{sec}^2$).

4. Evaluation Method

(1) Inertia Moment Measuring

Although there are many methods to measure the inertia moment, here shows the method using a torsion pendulum.

As shown on figure 1, with the inertia moment I ($\text{kg} \cdot \text{cm} \cdot \text{S}^2$) of steel body hung on a bar that has torsion elasticity k , when you give a torsion vibration, the torsion period $T(\text{S})$ is shown on the following expression.



Radius : $r(\text{cm})$, length l (cm), torsion elasticity : $k(\text{kg} \cdot \text{cm})$

Figure 1 torsion pendulum