



SNS COLLEGE OF TECHNOLOGY,

(An Autonomous Institution)

Coimbatore- 35

DEPARTMENT OF MECHATRONICS ENGINEERING

19MCT102 – ENGINEERING MATERIALS



IMPACT TESTING

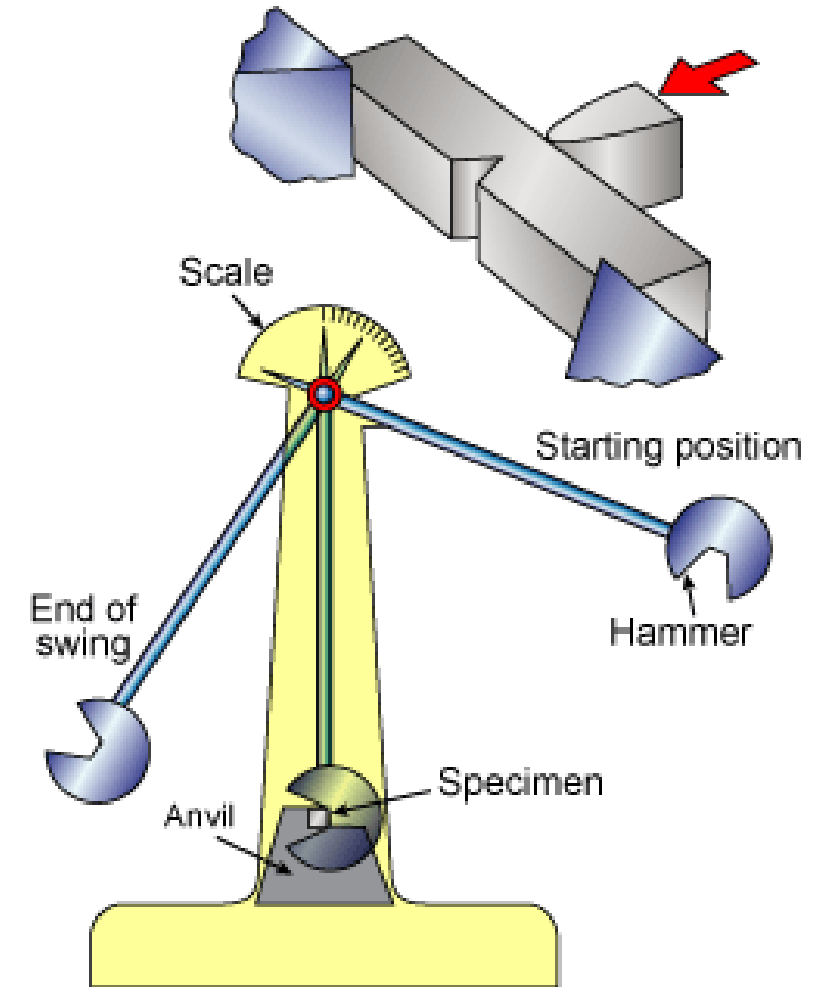
- An impact test is used to observe the mechanics that a material will exhibit when it experiences a shock loading that causes the specimen to immediately deform, fracture or rupture completely.
- To perform this test the sample is placed into a holding fixture with the geometry and orientation determined by the type of test that is used and then a known weight generally but not always in the shape of a pendulum is released from a known height.
- So that it collides with the specimen with a sudden force. This collision between the weight and specimen generally results in the destruction of the specimen but the transfer of energy between the two is used to determine the fracture mechanics of the material.





Charpy Impact Testing

- The Charpy impact test, also known as the Charpy V-notch test, is a standardized high strain-rate test which determines the amount of energy absorbed by a material during fracture.
- Absorbed energy is a measure of the material's notch toughness. It is widely used in industry, since it is easy to prepare and conduct and results can be obtained quickly and cheaply. A disadvantage is that some results are only comparative.





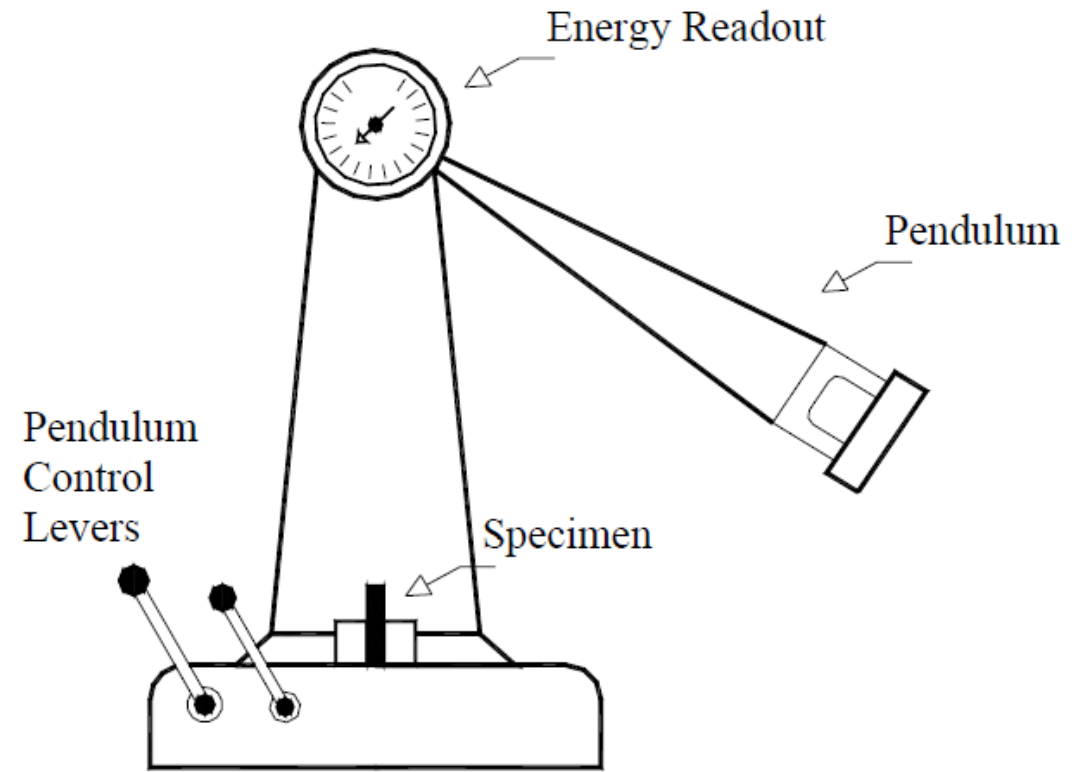
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Izod Impact testing

- The Izod impact strength test is an ASTM standard method of determining the impact resistance of materials. A pivoting arm is raised to a specific height (constant potential energy) and then released.
- The arm swings down hitting a notched sample, breaking the specimen. The energy absorbed by the sample is calculated from the height the arm swings to after hitting the sample.
- A notched sample is generally used to determine impact energy and notch sensitivity.



Impact Testing Machine.

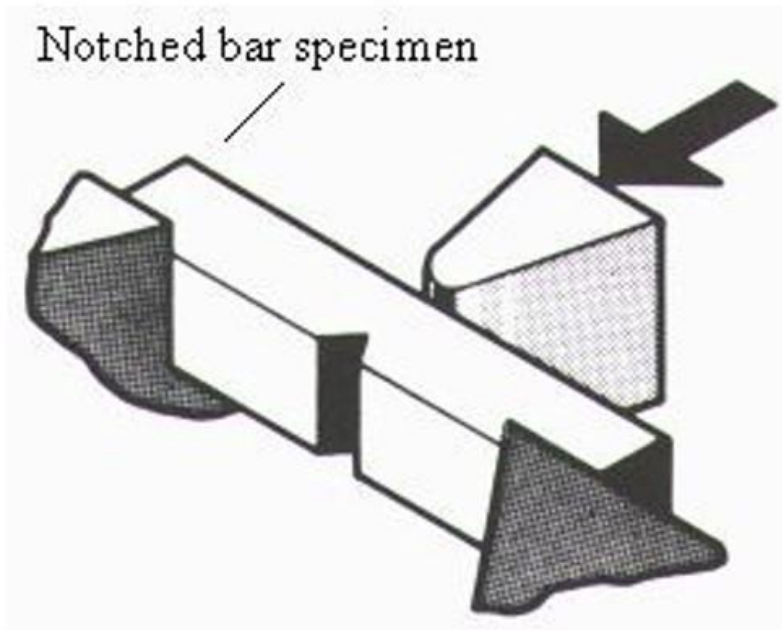


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Charpy Impact



Izod Impact

