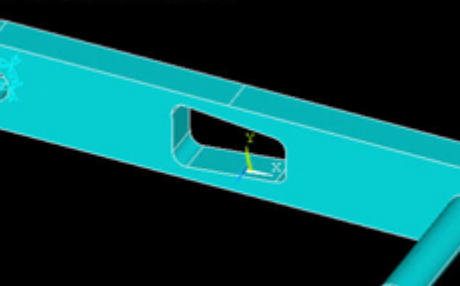


Technical drawing of a bicycle crank. The drawing includes three views: front view, side view, and end view. The front view shows a crank arm with a length of 200mm, a width of 25mm, and a central hole with a diameter of 10mm. The side view shows a crank arm with a length of 120mm, a width of 25mm, and a central hole with a diameter of 10mm. The end view shows a crank arm with a length of 25mm, a width of 25mm, and a central hole with a diameter of 10mm. The drawing includes dimension lines and labels for each view.



Inside of hole constrained
in X, Y, and Z directions

100 lbf applied
in -Y direction

The image shows a 3D model of a mechanical part, likely a bracket or a handle, rendered in a light blue color. The part has a long, rectangular body with a semi-circular end on the right. A cylindrical rod is attached to the end. A rectangular hole is located on the top surface of the body. A coordinate system is shown inside the hole, with the X-axis pointing to the right, the Y-axis pointing upwards, and the Z-axis pointing out of the page. A red arrow indicates a force of 100 lbf applied in the -Y direction at the end of the rod. The text 'Inside of hole constrained in X, Y, and Z directions' is displayed in the upper left, and '100 lbf applied in -Y direction' is displayed in the lower right.

Calculate the deflection, strain and stress distributions in the crank/pedal shaft combination for this loading condition. Use the ANSYS results to evaluate the degree of stress concentration in the vicinity of the cut-out in the crank geometry.

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