

SUMMARY

The aim of this work was adjustable die projection for press brake with a force of 630 tons.

There placing of usual dies takes a lot of time and resources. Adjustable die will help to avoid this. Because of structure workers can quickly and easily mount and demount die to press brake.

Press brake table has a length of 7000 mm. For ease of mounting die is divided into 7 parts by 1000 mm each. Each part consists of two halves. A machine operator moves parts to get a correct size of die throat. A worker fixes die throat by special underlay bars. Also the two halves are fixed together by means of bolted connections.

The first stage of this work was getting information about the process of bending, press brakes, dies and punches. After I did die model. In the terms of reference was specified width of the die throat $V = 50...400\text{mm}$. The die with the geometry is not possible, so I designed the width of the throat snap $V = 150...400\text{ mm}$. To obtain the desired geometry of the die, it is necessary to extend the substrate. The structure of the press brake does not allow doing it, because it will interfere with the sheet feeder. After all of necessary calculations were selected on the strength of materials suitable for each part.

In the future, the company has the ability and the desire to make this adjustable die. This type of equipment will significantly reduce tool replacing times, as well as create greater opportunities of bending process.