Hydraulic wool press Conor Reid k00289990

methodology

Introduction

- This project is going to be made to compact wool tightly into a small bag for storage and to reduce work load on the persons packing the wool
- The hydraulic wool press was brought around to compact as many fleeces of wool possible into a small wool pack for storage which reduces the amount of shed space needed
- The press is ran off hydraulics from the back of a tractor or a power pack

Background

- The wool press originated out of Australia in the late 1860s and was originally made of wood and was labour intensive to use as the compression was made using a cog and sprig clip system where the workers would have to work the timber levers to compact the wool
- When the hydraulic wool press was just a flick of a leaver to work the hydraulic ram so it cut down all the labour in packing wool



process

- The steel was ordered from banner steel and the hydraulic was ordered from Shannon hydraulics
- The design of the press was based off a **Hinieger ipw** wool press with a few modifications mine was based off a stationary version not one on a axle.
- Material must be cut with a bandsaw and plasma cut to mat the shape of the wool press

The main box of the wool press was made using 5mm sheet steel that was plasma cut and used a MiG welder to stick it together



Once this was done I moved on to making the outer frame out of 30x30 box to support the walls of the box when it is being compressed I also used a MiG welder for this



The door and upright for the hydraulic cylinder was added to the press. I also cut the holes for the compression holding pins using a gas torch the bottom was also added to make easier pick up for pallet forks or bale handler there will be to small hydraulic cylinders used to operate the compression pins and they will be operated by two hydraulic spools The latch was



The latch was designed so that it is easier opened under pressure with the wool pack being pressed agenised I slightly when fully packed The drawing above is a design of the original design for the wool press and it has a mechanical trip system for the compression pins which I changed to a hydraulic system for easy of manufacturing and assembly





Ollscoil Teicneolaíochta na Sionainne: Lár Tíre, An tIarthar Láir Technological University of the Shannon: Midlands Midwest

conclusion

If I was to start all over again id choose to make something simpler than the wool press. The design was too finally done and takes too long to machine the parts to the specific size needed there is too much involved in making the project for the timeline given .If there was more facility's in the college then the project would have been easier worked.



References

Id like to thank Garry Rohan and Gerry burke for their help also lecturers from Tus and Pallaskenry Hinieger .co .uk

The big hydraulic cylinder was made in Athenry by Gerry burke engineering as the ram needed to be quite large and there had to be plate for mounting put in the flange cap.



LUBRICATION POINTS

