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Electric Billet Shears

Bill Murray

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Mr. Stephen Ordog  
Morgan Construction Company  
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MASSACHUSETTS 01605  
U.S.A.

Dear Stephen:

Electric Billet Shears

Yesterday I called on Rheinhausen to discuss the contents of your letter dated 3 September 1964 to L. Peterett, on the subject of tail end trouble at the electric shear.

Whereas the suggested method of overcoming the trouble is commendable, it does not suit Rheinhausen because they sell billet lengths of less than 14 feet and our suggestion is to cut anything between 14 feet and 4 feet in two pieces and drop them into the scrap pan.

The tail end trouble is confined to lengths that do not span the last roller ahead of the shear and the swinging roller, lengths which span this gap invariably go to the cooling beds and in Rheinhausen's case are sold as billets.

Let us now think of a tail end about 4 to 5 feet long, it leaves the last roller ahead of the shear and lands on the swinging roller but does not reach the first roller of the run out table. The swinging roller is now a fulcrum and the greater weight is towards the shear and consequently the piece falls down onto the bottom blade crank and stays there. If a man is near the shear and is quick he can bar the piece down the scrap chute, if not the next front end is cropped and the tailend also.

Steve - I think they have missed the point of making the double cut, namely to minimize the possibility of the back sliding piece sticking on the crank - perhaps the photocells should be set 7'6" & 4' cont'd
We must therefore prevent these tail ends from falling onto the bottom blade crank and at the same time remaining on the swinging roller and I would suggest the following method.

Mount an idle roller above the swing roller, this roller to have two positions, it will be in the high position until the shear has made its last cut and then come down to the low position to contact the tail end. As the swing roller is driven the pinch from the top roller will push the tail end onto the runout table where it will fall to mill floor level between the first and second runout table rollers on the 45° plate.

We discussed the use of the three roller arrangement as used by Siemag, but I don't see how this would help. Our swing roller in the up position is just clear of the blades and it would be dangerous to have a roller ahead of it, therefore the first of the three rollers will behave in the same way as one single swing roller.

Rheinhausen sell their shorts as billets but must crop the extreme tail end, they used to do this cold but now have the electric billet to do this and save much handling. Their billet mills supply several finishing mills which require different lengths and qualities and they cut the first three billets from some blooms at say 30 feet and the remainder at 20 feet, this is done automatically.

Kind regards,

Sincerely

WM/swf
for Min. List & A.C. Marsters
Siemag

Drawing 111222 enclosed