

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Instruction
Hartford

SHOP THEORY FOR THE MACHINE TRADES

SUBJECT: Metallurgy of Iron and Steel

SESSION 5.

Audio Visual Lesson

OBJECT: Study of Steel Mill Processes

METHOD: Run following films from U.S. Bureau of Mines:
#176.S23, Steel Pipe and Tube Mfg. 16 m.m., 15 min., silent.
#175.S55, Steel Wire and Wire Products, " " " "
#173.S16, Steel Shapes " " " "
#172.S78, Steel Flat Rolled Products " " " "

STUDENTS ASSIGNMENT

1. Answer the following questions on a separate sheet of paper:
2. Discussion and grading of papers.

QUESTIONS

1. Where is the "bulge" test used?
2. How is slag removed from the electric steel making furnace?
3. Why does the mold not stick to the steel ingot when it is lifted off?
4. Why are steel ingots always soaked before rolling?
5. Why is an undercutting machine used in coal mining?
6. How does bottom pouring from ladles of melted steel separate the steel from the slag?
7. What is the approximate temperature of the air blast that is introduced into the blast furnace?
8. What is "blooming"?
9. What, in your opinion, is the fluid and the purpose of the fluid that you saw flooding the rolls in all hot rolling operations?
10. To what extent does steel enter into the construction of modern skyscrapers?