



**THE BALTIMORE AND OHIO RAILROAD
HISTORICAL SOCIETY**

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From the Archives #1

Scan of “Unit Operations: Keyser, West Virginia - Car Department”

Introduction:

This document was found during one of our sorting sessions in 2005. We really didn't know how to properly share this find with our members and the general public. It's original size of 8.5 inches by 14 (less the 4 foot long folded site plan) made it difficult to scan commercially and the wealth of photos inside made it more difficult to photocopy and do justice to the images.

In the end, we were able to scan this item in house at the Archives and turn it into a PDF. The book was scanned at 300 dpi and the images were compressed some to keep the file size manageable.

We don't have much history on the book itself. Clearly it was meant for either an executive audience or as a public relations tool. It was found in the Operating Vice President's files at the Archives, so I'm leaning toward executive audience myself.

In any event, it gives the reader a really nice overview of the car department operations at Keyser, WV. The pictures are very interesting and I think that anyone especially interested in hopper cars and their construction will enjoy this item immensely.

If anyone has any more information as to the provenance of this item, please contact me at: archivist@borhs.org We are always looking to add to our knowledge and will be happy to add your contribution to Keyser Car Dept CD-2.0.

Thank you, and enjoy!

Nick Fry
Archivist B&ORRHS

KEYSER, WEST VIRGINIA
UNIT OPERATIONS
CAR DEPARTMENT

THE UNIT SYSTEM OF FREIGHT CAR REPAIRS - KEYSER, WEST VIRGINIA

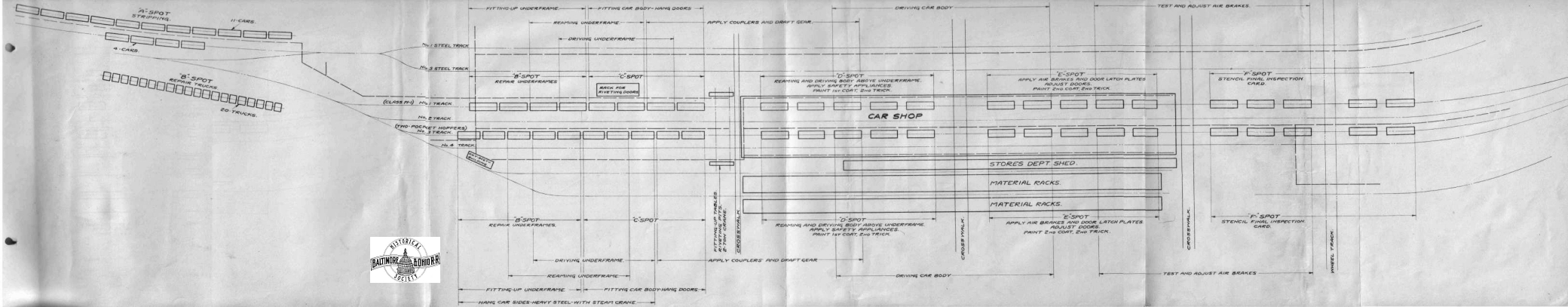
THE BALTIMORE AND OHIO RAILROAD COMPANY

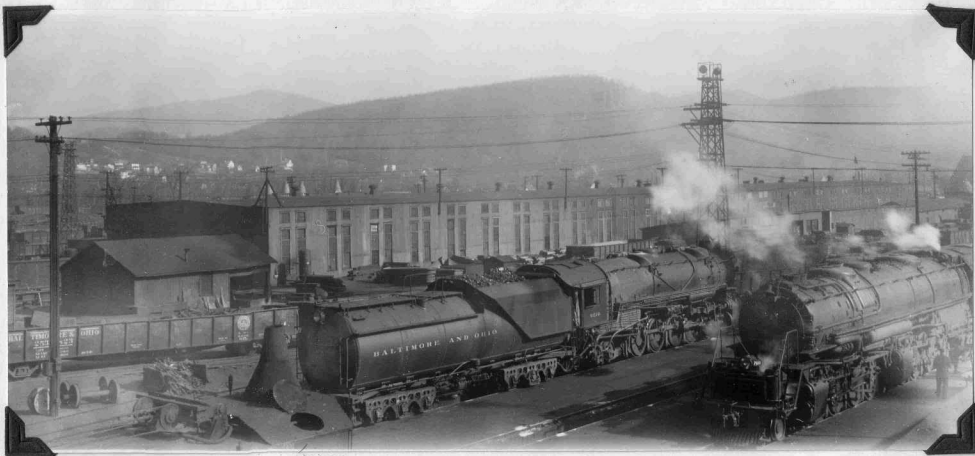
The Unit System of freight car repairs with spot operations insures cars being repaired and restored to service within a specified minimum number of days. The handling of cars is accomplished through the shop by switch connected tracks on both ends, each track holding equal number of cars, the number depending upon type of cars being repaired.

Fifty men compose a unit of workers, the number of each classification being in proper relation for handling the work from one spot to the other without slow-down or work stoppage. The men are permanently stationed at each spot on each track. Cars are moved as they progress in repairs each day. The work assigned to each spot is completed each day, and all cars are moved to the succeeding spots. Spots are designated with a letter of the alphabet from "A" to "F", and also designated by a color.

Such is the system and method of repairs to freight cars at Keyser, West Virginia, where the following operations were photographed.







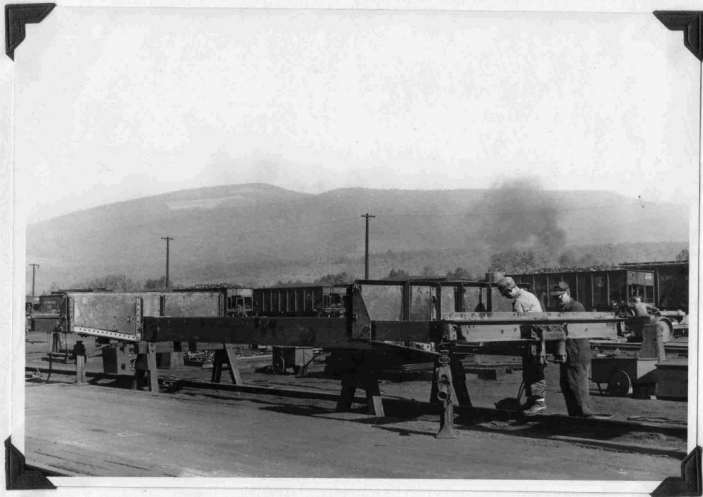
THE CAR BARN

The majority of the work performed at Keyser, W. Va. Car Shop is on Hopper Type Cars. Here, ten units, a total of five hundred men, are engaged in heavy repairs to this type of equipment. As shown on the preceding white print, this work is performed on four tracks, extending above, thru, and below the Car Barn. Cars, when removed from service and sent to shop for repair, arrive at the west entrance to the shop yards, at a point designated as Spot "A", and move progressively thru the various spots. The method is almost identical to the conveyor method of the Automotive Industry, other than the cars move on their own wheels.



Spot "A" - Here cars are given a very thorough inspection, defective parts are removed, trucks are removed and sent to a special truck spot for overhaul. Cars are placed on trestles and parts requiring renewal are replaced.



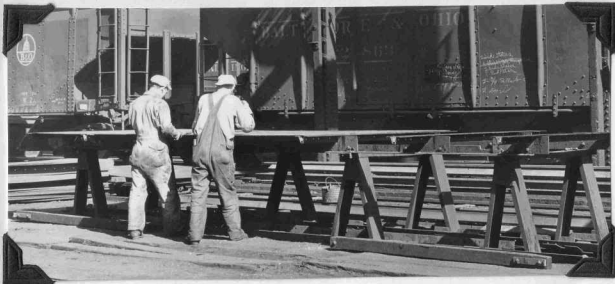


Spot "B" - In many cases the cars are stripped down to the underframe or sills





Spot "B" - Where all repairs to the underframe are completed.

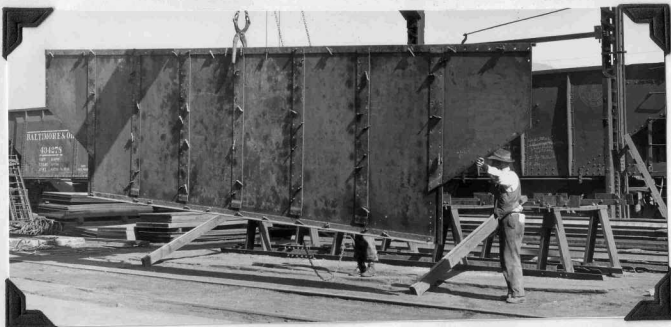


Spot "B" - The fabrication of car sides is begun. Left - laying out and fitting up hopper car side on bench.



Rivet holes are reamed, and sheets formed in a single unit.



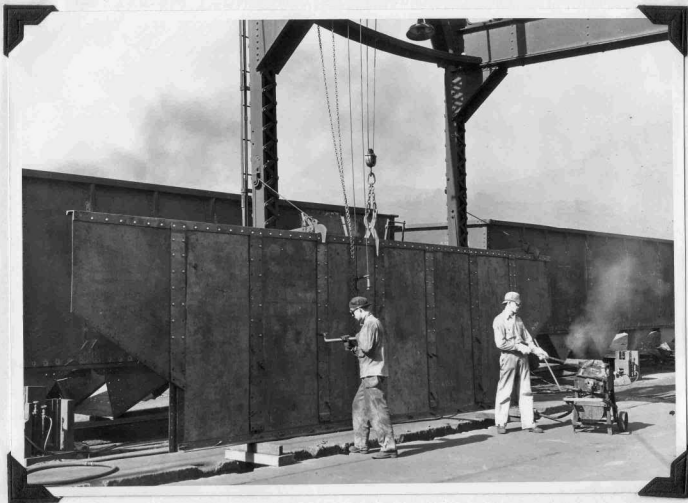


Being held together with fitting up bolts, sides are then moved with three-ton crane to

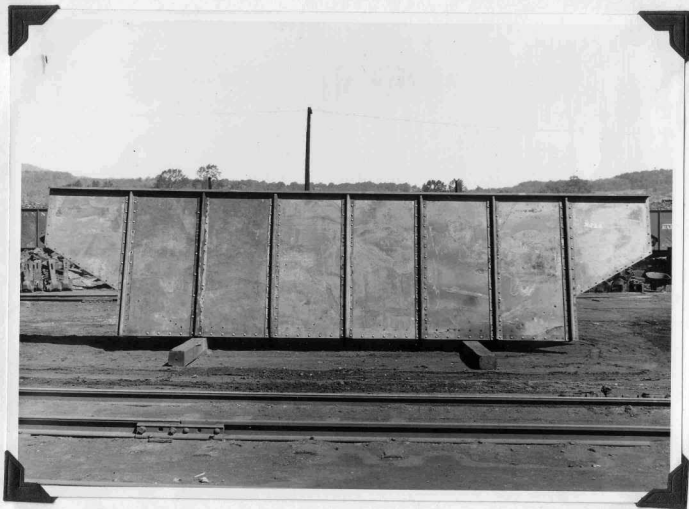


a pit provided so that car sides may be lowered or raised and rivets can be driven with men standing in normal position without the use of staging.
Right - driving rivets in upper portion of car side.

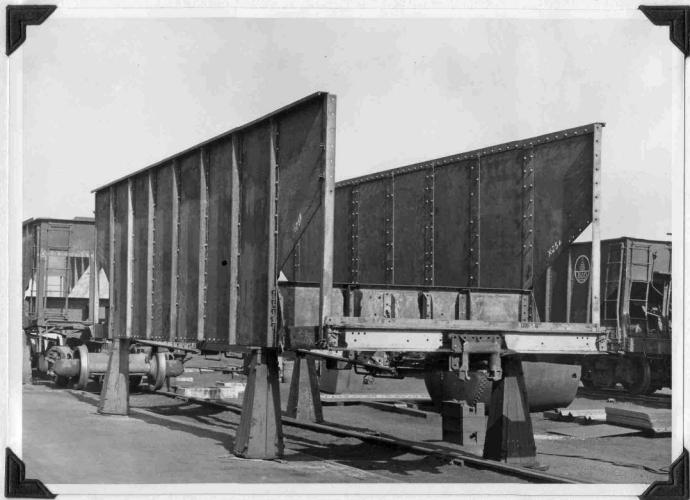




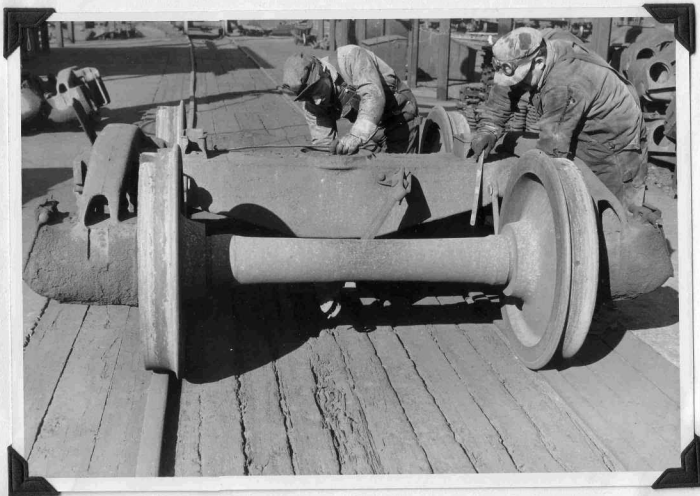
Side is then raised and held in position while the rivets in bottom part of sheet are driven.



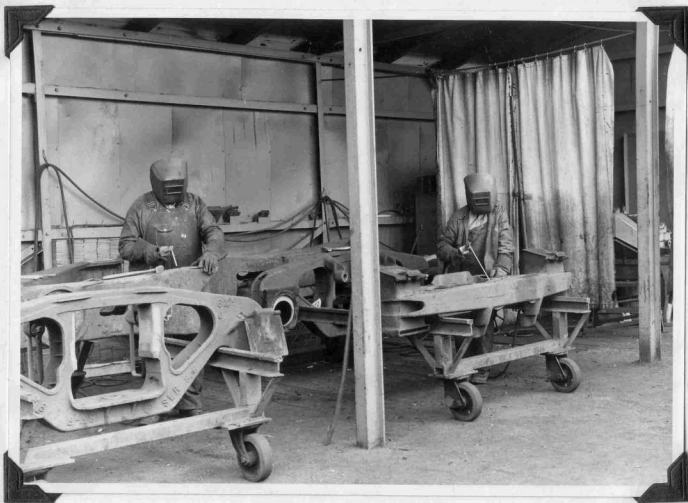
Side completely fabricated.



Sides are then attached to underframe, and the rebuilding of the car is well under way.



On a special track, a spot system of its own schedules the examination, stripping, and repairing of trucks.



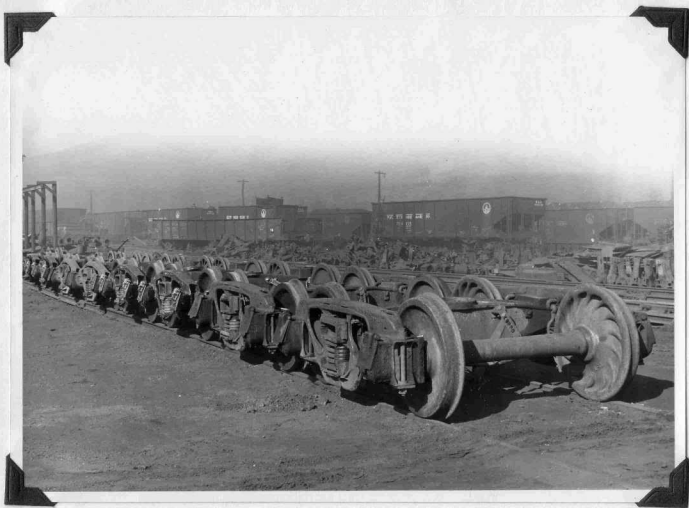
Provision is made for the examination and repairs to side truck frames.



After truck frames have been welded, they are placed in furnace and annealed in accordance with provisions of the rules of the Association of American Railroads.



Gauging the height of truck.



The Completed Truck.



Coupler shanks are straightened and



yokes applied.





Couplers are then ready for use.



Hopper Doors fabricated in advance of requirements on special convenient racks.



Spot "B" - After car sides are hung, cars are again placed on trucks, couplers replaced, and car moves on to Spot "C".





Spot "C" - The work continues, draft gears and attachments are repaired.





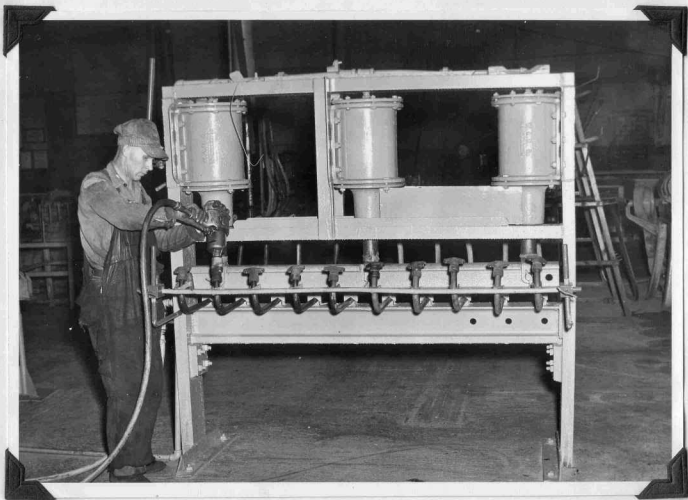
Car then moves to Spot "D" inside the barn, where the work of reaming and driving body above underframe is accomplished.





Spot "F" - Safety appliances are installed, doors are hung, and car is ready for application of AB equipment.





Flange unions are applied...

To facilitate the application of "AB" brakes, the pipe shop has been set up on a very efficient production basis. To affect the greatest economy in labor and material, various shapes of pipe necessary for each class of car handled are made up and taken to the car in complete sets for application of AB brakes.



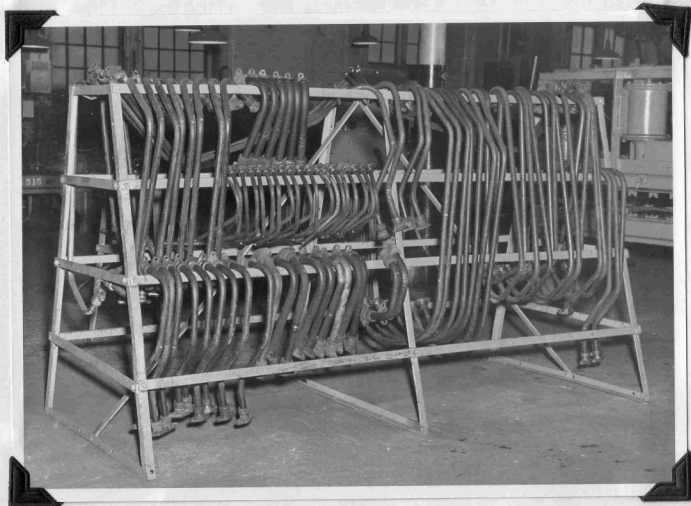


Pipe is cut to various lengths, threaded,

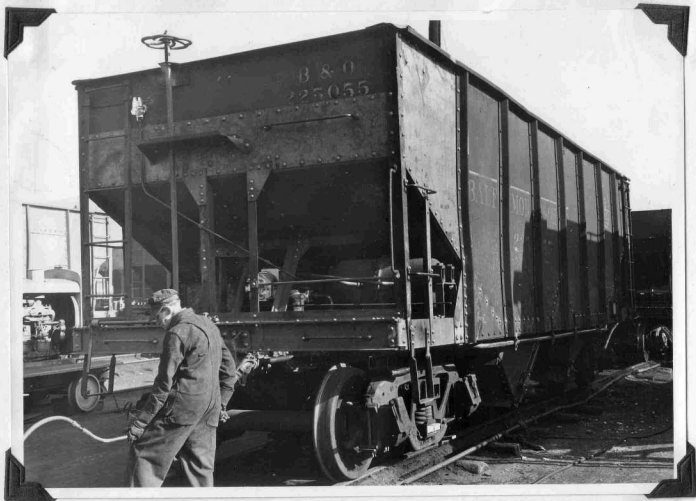


and then bent to shape.



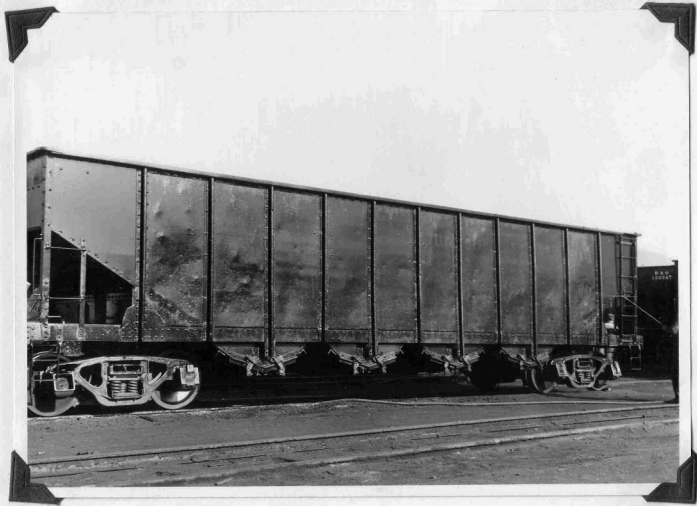


Various shaped pipes necessary for application of "AB" brakes for each class of car are made up in advance and delivered to the Spot in complete sets.



The Air Brake Equipment is all in order and given final inspection.
Equipment is tested, and car is then ready for...





the first coat of paint. This work is done on the second trick, so as to not interfere with the other workmen.

BALT IMOR E & OHIO

726 134

CAPY 100000
LB LMT 131500
LT WT 37500

KV 8-4S

BR&P 55134
BLT 1118
NO MARK



240 TON C
MAX COMPLD A CRG
CU FT 1880
N-17B





BALTIMORE & OHIO

432823

CAPY 140000
LD LMT 159800
LT WT 50200 KY 8-48

WROT STEEL
WHEELS



BAR STEEL

MAX. OVERALL H. 12' 0"

CURB STKG

W 2

NET 9' 0"

AS SHOWN



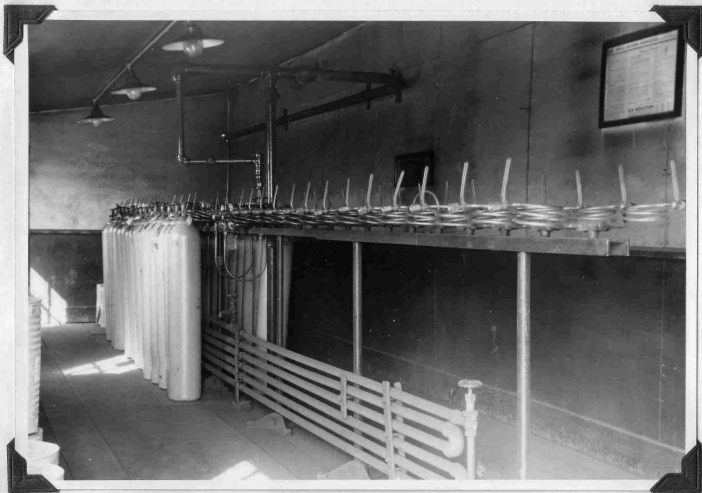


Spot "F" - After the second coat of paint is applied, the car is stencilled, and car is again serviceable and ready to go back to the transportation department for many more months of service.





The Oxygen and Acetylene Plant



Formerly oxygen was purchased in tubes and manifolded in the oxygen and acetylene plant, and piped to many locations where needed.



SOMETHING NEW HAS BEEN ADDED

Recently, a trailer system was inaugurated and oxygen is furnished in a trailer. When the supply is depleted, another trailer is attached to the line and the other one returned to Air Reduction Sales Company for refilling.

