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Correspondence to Willard Blanchard

M. M.

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Dear Willard:

I am quoting the following from a report received from our European Manager that may or may not be of any interest to you in connection with rod defects:

"Each have troubles like everybody with cold heading material surface and we discussed typical surface defects on microphotos with Rimbeaux, who explained a new-to-me method of defining a metallurgical defect against a mechanical defect."

'The prepared section surface is treated with a solution which, if the defect is of metallurgical origin, surrounds the defect with a whitish area on the photograph. This solution is composed of:-

\[
\begin{align*}
500 \text{ cm}^3 & \text{ Distilled Water} \\
500 \text{ "} & \text{ C2 H5 OH} \\
50 \text{ "} & \text{ HCL} \\
30 \text{ g} & \text{ Fe CL3} \\
1 \text{ g} & \text{ Cu CL2} \\
0.5 \text{ g} & \text{ SNCL2}
\end{align*}
\]

and is called Oberhoffer Solution. This solution shows up excessive Phosphorous in the areas of the defect and indicates the original gas bubble source of the defect."

"Rimbeaux says that their steel plant agree that if this test shows the presence of phosphorous, the origin is in the steel-making, not in the mills. This at least is a step forward, we have never really been sure of anything regarding small surface defects."

Sincerely,

MM: jc