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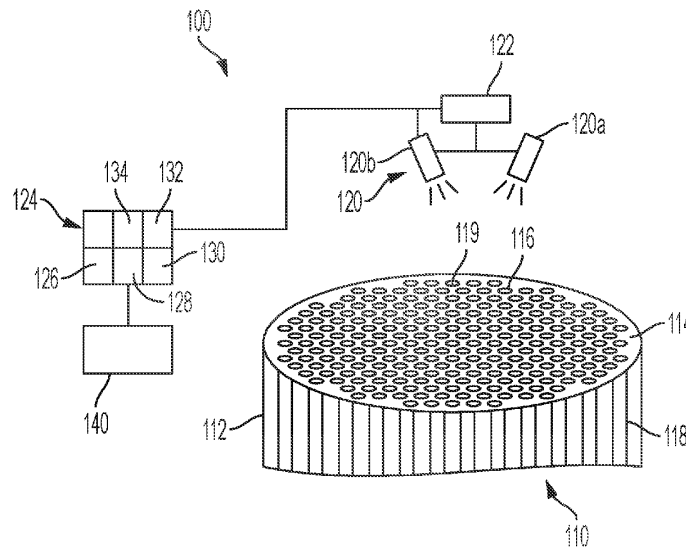


FIG. 1

(57) Abstract: Shell-and-tube devices typically require regular maintenance. Described herein is an automated method for tracking the status of individual tubes during maintenance activities and recording status data for review and analysis. Status data may optionally be reported in real-time summary format and/or used to predict time-to-completion. The method minimizes omission errors and helps to reduce the expense of performing maintenance activities in shell-and-tube devices, including shell-and-tube reactors and heat exchangers.

[Continued on next page]

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