AOBA's Engineering Survey

In order to more fully understand the depth and breadth of the problem, AOBA distributed an engineering staffing survey to 83 of its members in the June 2016. Seventeen members returned surveys. While the results are not necessarily statistically reliable, they do offer a glimpse about the extent of the problem and its impact on AOBA's members.

Highlights of the survey:

- Using a 5-point Likert scale (1 = very easy and 5 = very difficult), participants were asked a series of questions relating to their ability to recruit, train, and retain engineering team members:

Question	1 Very Easy	2 Easy	3 Neutral	4 Difficult
Finding qualified candidates for your firm's entry-level engineering and maintenance positions is…	5.8%	23.5%	23.5%	5.8%
Finding qualified candidates for your firm's supervisory-level engineering and maintenance positions is…	5.8%	5.8%	5.8%	52.9%
Training existing engineering/maintenance hires on current job requirements is…	5.8%	58.8%	23.5%	11.7%
Keeping new hires on your building team for more than 3-5 years is…	23.5%	41.1%	23.5%	11.7%
Advancing junior-level staff to higher-level management positions is…	5.8%	29.4%	29.4%	29.4%

- In terms of finding qualified candidates for entry-level engineering positions:
  - The majority of respondents indicated that doing so is "very difficult.
  - Interestingly, almost half of the respondents indicated that finding qualified candidates was either "easy" or "neutral." Based upon discussions during the task force's facilitated meetings, these firms might have a program that helps day porters (or other non-skilled laborers with the potential to succeed as an engineer) transition into entry-level maintenance positions. Since this survey finding does not support the commonly held belief that recruiting entry-level engineering employees is difficult, we need to dig deeper to determine if these findings are the result of bad polling or indicate that some companies in the market have found a solution to this aspect of the problem.

    - Although the results of the survey are somewhat mixed, the task force believes recruiting entry-level engineering employees is one of the most important issues that needs to be addressed through the engineering talent initiative.
- In terms of finding qualified candidates for supervisory-level engineering positions:
    - 3% of the respondents reported that finding supervisory-level engineering talent was either "difficult" or "very difficult."
    - As we predicted, it is readily apparent that this area should be addressed as an opportunity for AOBA to help member companies to prepare their entry-level employees for supervisory-level engineering positions.
    - In terms of training existing maintenance and engineering team members on the skills they need to perform their current job:
    - Nearly 60% of the respondents identified that it was "easy" to train team members about their current job responsibilities – and a combined 82.3% of the respondents reported that this was either "easy" or "neutral."
- Based upon the results of the survey, this does not initially appear to an area of great concern for our members. However, at least anecdotally, the task force members believe the survey results might not accurately reflect the marketplace reality. We need to dig deeper to more clearly understand the degree to which this is a concern for our member companies.
- In terms of keeping new hires (the survey did not specify if those "new hires" are entry-level, mid-level, or senior-level):
    - 1% of the respondents reported that it is "very easy," "easy," or "neutral" to keep engineering talent for 3-5 years.
    - The survey results suggest this is not an area of concern for the members. Once again, the results might change with a revised survey instrument – particularly if the survey results prove to be invalid. We need to dig deeper to more clearly understand the degree to which this is a concern for our member companies.
- In terms of advancing entry-level engineers to supervisory-level positions:
    - These results are interesting in that they are almost balanced across the Likert scale. A very small percentage of respondents (5.8%) reported results at either end of the scale – either "very easy" or "very difficult." The remaining responses were evenly split between "easy," "neutral," and "difficult."
    - Based upon the survey results, it is challenging to determine the extent to which this is an issue for our members. We need to further assess this area to determine if this is an issue that should become an action item.
- When asked about how companies train their engineering and maintenance team members, respondents indicated:

Training Option *(Respondents were directed to "check all that apply")*	Response
On-the-job training	24.2%
NAPE courses	22.7%
In-house training by vendors	16.6%
Professional industry education/designation programs	15.1%
BOMI courses	9%
Other training programs (LEED® courses, on-line courses, IUOE apprenticeship program, on-line tools through OSHA, etc.	6%
Community college courses	4.5%
Internships	1.5%

It is important to keep in mind that the survey results – which were shared with the task force before the first meeting – are based upon a limited sample size. In addition, the specific questions that were included in the survey could perhaps have been tweaked to obtain more detailed – and potentially more accurate – results. For these reasons, the survey results do not necessarily provide "actionable" information that can be used to guide decision making. However, the survey results paint a broad picture that supports the notion that the "engineering crisis" is a significant issue facing AOBA members. The task force believes it is important to gather more detailed information from its members, and they highly recommend sending a comprehensive survey to its member companies as a way of collecting data about the scope of the "engineering talent problem" and its impact on the industry.