



Industry Case Studies

Manufacturing Industry Operators and Test Engineers

Challenge: A large manufacturer of lighting products sought to improve their selection procedures for Operators and Test Engineers. A review of potential selection techniques suggested that including personality assessment in the existing selection process could significantly improve the selection of successful Operators and Test Engineers.

Solution: To determine the characteristics of successful Operators and Test Engineers, Hogan conducted a criterion study and asked 44 incumbent Operators and 80 incumbent Test Engineers to complete the Hogan Personality Inventory (HPI). The HPI measures personal characteristics essential for successful job performance. Supervisor also rated Operators and Test Engineers on several job characteristics, such as interpersonal skills, stress tolerance, and customer service.

Result: Hogan investigated relationships between the HPI scales and performance criteria for Operators and Test Engineers. For Operators, ratings on customer service were strongly related to several HPI scales, most notably Adjustment ($r = .40$), Ambition ($r = .20$), Interpersonal Sensitivity ($r = .46$), and Prudence ($r = .37$). In addition, these four scales predicted ratings on teamwork, interpersonal skills, stress tolerance, and overall job performance.

For Test Engineers, ratings on interpersonal skills were strongly related to several HPI scales, in particular the Adjustment ($r = .19$), Ambition ($r = .32$), Interpersonal Sensitivity ($r = .38$), and Prudence ($r = .18$) scales. Furthermore, these scales also predicted ratings on teamwork and customer service with Ambition also having a small positive correlation with Learning ($r = .19$).

Based on this evidence, Hogan recommended using the HPI Adjustment, Ambition, Interpersonal Sensitivity, and Prudence scales to select Operations and Test Engineers. Individuals who met the proposed cuts tended to be calm and consistent (high Adjustment), results-oriented (high Ambition), encouraging of teamwork (high Interpersonal Sensitivity), and rule-compliant (high Prudence).

Hogan also calculated odds ratios to compare the performance of individuals who met the proposed profile to those who did not. Operators and Test Engineers who met the proposed profile were 2.5 times more likely to be rated as a high performer by their superior than those who did not meet the proposed profile.

Taken together, these results demonstrate that the inclusion of the HPI into the existing selection process substantially can improve the identification of successful Operators and Test Engineers.