



ADVANCING THE TECHNICAL DEVELOPMENT, PRODUCTION, PROCESSING AND APPLICATION OF IRON AND STEEL

INDUSTRY-UNIVERSITY ROUNDTABLE RECRUITING PERSPECTIVES

TO: Steel Industry Executives

Facts about students that affect recruiting into the steel industry:

- Today's kids take technology for granted yet have little interest in science or engineering.
- Students interested in science or engineering, are typically interested in high tech (nanotechnology) or medical fields, rarely manufacturing.
- Student perception of manufacturing (including steel) is negative.
- The number of engineering graduates has declined compared to the increased number of engineering jobs available.
- The limited number of students who do graduate with an engineering degree have many opportunities outside of steel.
- When making career decisions, students are influenced by those around them including professors, fellow students and parents.

Facts about professors that affect recruiting into the steel industry:

- Today there are very few universities and professors emphasizing metals manufacturing or the steel industry.
- Universities typically replace retiring metals manufacturing or steel oriented professors with professors in high tech areas such as biomaterials, fuel cells, alternative energy, etc. where there are more opportunities to generate significant research reputations and dollars.
- If the steel industry (corporately or through individual companies) wants to attract and retain professors that emphasize metals manufacturing or steel, the industry or companies must provide sustainable and reputable research programs and/or endow chairs/professors that sustain a metals emphasis.
- Although professors generally are happy when students get scholarships, or industry jobs, it is not reflected in the professor's or department's reputation, salary, promotions, etc.
- Professor salary and promotions/reputation are based primarily on scholarly research which consists of sustainable research dollars, graduating Ph.D students (M.S. less significant and B.S. not counted) and refereed journal articles (AIST conference proceedings do not count).
- Outside funding sources (NSF, DOE, DOD, NIST, EPA, NIH, etc.) support most university research and show very little interest in metal manufacturing or the steel industry. If the steel industry wants professors and more industrial research, they need to help obtain outside funding or provide the research themselves.
- Professors will emphasize the interests of those supporting the research to the students.
- Typically, a research project supporting a professor and a graduate student at a university will cost at least \$60,000 per year depending on equipment and supply needs.