

Worldwide Need and Availability of Fluid Power Certification Programs

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The Challenge

- Many of the industrialized countries around the world have an aging population and thus an aging workforce. As that population reaches retirement age, organizations are faced with the prospect of losing many workers with key talents, experience and skills.
- As a result, there will be a significant challenge in the knowledge transfer unless individuals have the necessary skills to understand and apply technology.

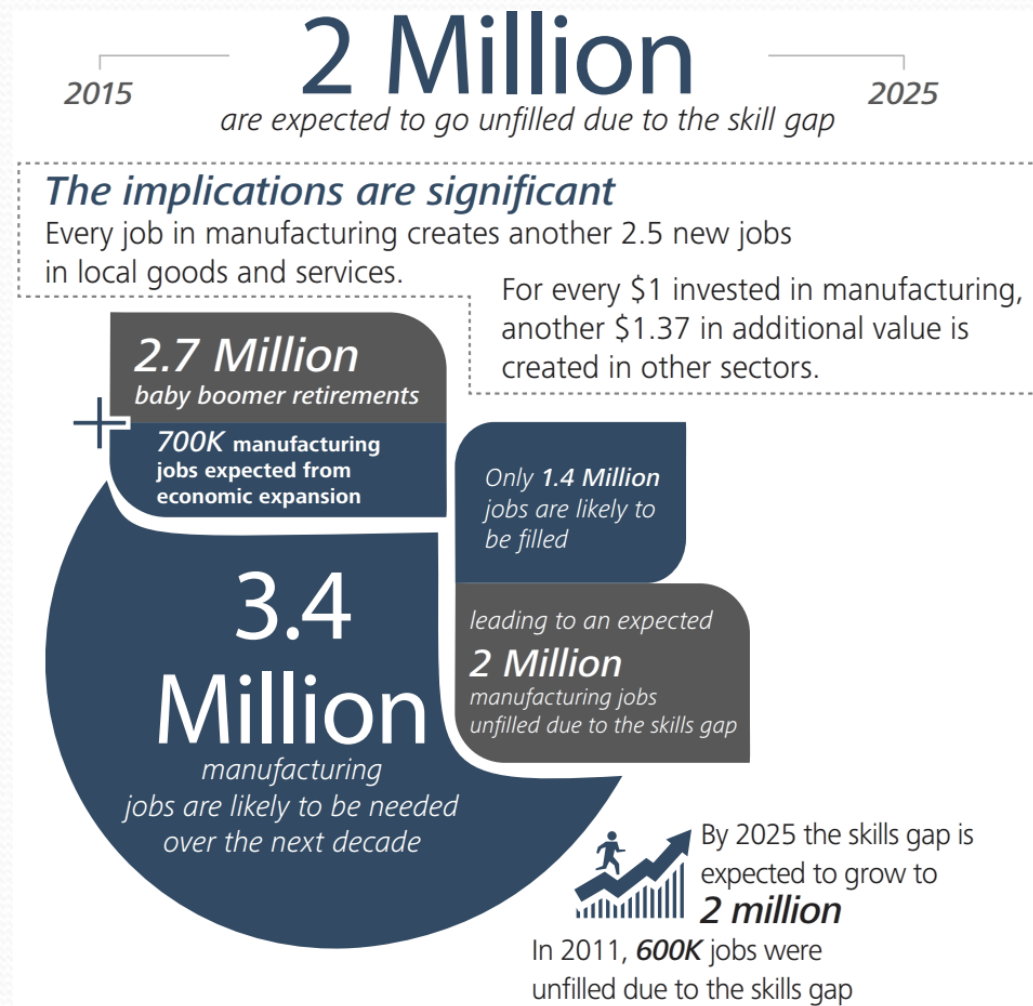
The Challenge

- According to recent survey, 40% of U.S. employers and 36% of global employers report difficulty in filling jobs.¹
- The areas of skilled production (machinists, operators, and technicians) will be the hardest hit. Considering that skilled production occupations account for over 50% of the total manufacturing workforce, worker shortages in this category will present a significant challenge to companies.²

¹ “2014 Global Talent Shortage Survey”
Manpower Group (US)

² “The Skills Gap in U.S. Manufacturing 2015 and Beyond”
Deloitte Development and the Manufacturing Institute

The Challenge

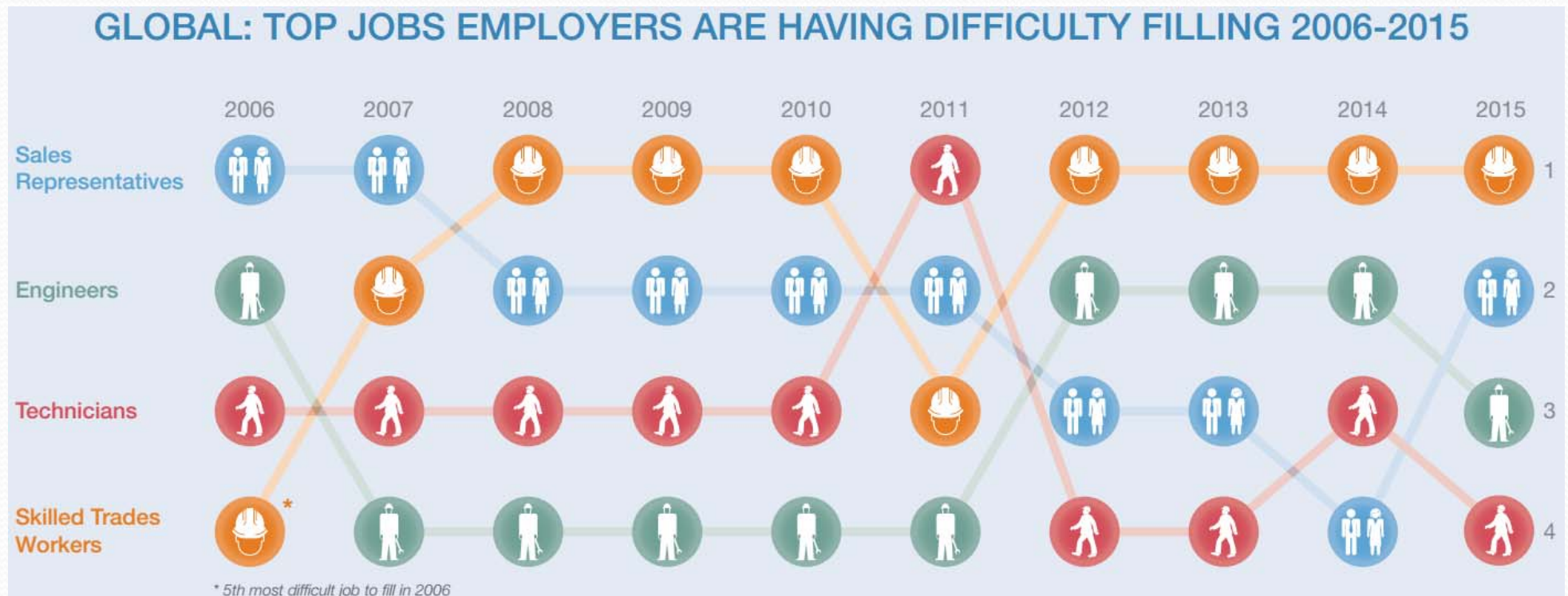


The Challenge

- The skills gap is not isolated to the United States. It is becoming a global concern.
- “Inadequate training and myths relating to skilled trades are creating a dangerous shortage of skilled workers. Employers and governments need to bring honor back to the skilled trades and ensure that skilled workers have the necessary technical and ‘soft’ skills to plug the shortage.”³

³ “Strategic Migration – A Short-Term Solution to the Skilled Trades Shortage”
Iwona Janas, Manpower, Warsaw Poland 2015

The Challenge



Impact on Fluid Power

- The skills gap in Fluid Power is as deep and wide as any industry.
- The number of individuals entering and staying in the Fluid Power industry compared with those leaving is strikingly disproportionate.
- The encroachment from competing technologies will only erode the footprint of Fluid Power as a dominant force in mechanical transmission of power and motion control.
- By failing to invest in employee development including training, the Fluid Power industry and its users are inadvertently promoting their own demise. The need for education and Fluid Power credentials is paramount.

Opportunity

- At the same time, there is also great opportunity for those willing to learn new skills and to work hard in applying them.
- On average, manufacturing incomes are 20% higher than compared to what an average worker earned in other occupations.⁴

- cer·ti·fi·ca·tion

/ˌsɜrdɪfɪˈkɑːʃ(ə)n/

noun NORTH AMERICAN

the action or process of providing someone or something with an official document attesting to a status or level of achievement.

⁴ National Association of Manufacturers, 2013

License vs. Certification

License:

- Granted by a governmental licensing agency.
- Gives legal authority to work in an occupation.
- Requires meeting predetermined criteria, such as having a degree or passing a state-administered exam.

Certification:

- Awarded by a professional organization or nongovernmental body.
- Is not legally required in order to work in an occupation.
- Requires demonstration of competency to do a specific job, often through an examination process.

License vs. Certification

- Job licensing is mandatory and could result in legal penalty for violating license laws.
- Certification is voluntary (although some companies may require it for employment or promotion).
- While similar trades require licenses (electrical, plumbing, HVAC), in the United States, there is currently no government mandated standards for workers in the Fluid Power industry.

Europe- CETOP

Individual Competence Based Qualification

- **Knowledge** – Series of written assignments.
- **Understanding** – Written examination.
- **Application** – Series of competence based tasks related to a specific “key function”. Objective assessments based upon at least two performance measures under different conditions and criteria.
- Approved Education Centers are located throughout Europe and the UK.

Europe- CETOP

- Level 1 – Basic Functionality of Fluid Power Systems
- Level 2 – Function and Operation of Fluid Power Systems
- Level 3 – Function, Operation, Application and Technical Specifications of Fluid Power Systems

Hydraulic Levels:

Hydraulics Program- Level 1, 2, 3

Mobile Hydraulics Program- Level 2, 3

Industrial Hydraulics Program- Level 2, 3

Pneumatic Levels:

Pneumatics Program- Level 1

Pneumatic Program- Level 2

Pneumatic Program- Level 3

Australia

Australian Fluid Power Society (AFPS)

- High Pressure Hose Assembler (HPHA) Certification.
- Designed to ensure assemblers of high pressure hose assemblies are accredited to a national standard.
- Candidates must submit official proof of a Certificate II in Engineering and an employer reference letter.
- The AFPS is a strong promotor of IFPS certification and promotes IFPS certification.

Australia

Government of Western Australia

TAFE (Technical and Further Education)

- Certificate IV in Engineering (Fluid Power) developed to provide the specialist skills and knowledge to analyze, inspect, and maintain hydraulic and pneumatic systems and provide awareness of workplace health and safety.
- Provides career pathway as a hydraulic fitter or technician, hydraulic systems designer, or in hydraulic equipment sales.

Japan

- The National Trade Skill Test & Certification (NTSTC) is a national testing system certified by the Japanese government to test the technical skills and knowledge of workers according to uniform standards.
- Upon successful passing of exams, workers are issued the title of “Certified Skilled Worker”.
 - Grade 1: Skill level for a senior level worker.
 - Grade 2: Skill level for a mid-level worker.
 - Grade 3: Skill level for a starting level worker.

South Africa

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

The South African Qualifications Authority Board is a body of 12 members appointed by the Minister of Higher Education and Training which offers a “Further Education and Training Certificate” in Fluid Power. The program requires 160 credits covering communication, mathematics and other core requirements in addition to the areas of hydraulic and pneumatic specialization in the areas of design, assembly, test and troubleshooting.

Certification in the United States of America International Fluid Power Society (IFPS)

The International Fluid Power Society is the only organization that exclusively provides comprehensive technical certification offerings for all professionals in the fluid power and motion control industry. IFPS certification tests provide an objective, third-party assessment of an individual's skill level.



International Fluid Power Society (IFPS)

- Founded 1960 in Milwaukee, WI, USA
President: Frank Macklin, General Motors Institute
- 5,000 active memberships
- Over 20,000 certifications have been issued since 1980 with over 10,000 still being active
- Society's mission is to advance education, professionalism and certification in the fluid power industry.



IFPS Certification Milestones

1961

Membership reached 1000 in 17 regional chapters

1980

Fluid Power Specialist Certification

1993

Mobile Hydraulic Mechanic and Technician Certifications

1993

Fluid Power Engineer Certification

1994

Industrial Hydraulic Mechanic and Technician Certifications

1995

Pneumatic Specialist Certification

2002

Lisa Reeve elected first female president

2003

Connector and Conductor Certification

2009

Electronic Controls Specialist

2015

Systems Designer Certification



IFPS Certifications

Can be administered online anywhere in the world, currently in English only and have successfully been administered in:

Australia

Malaysia

Canada

Mexico

Chile

New Zealand

Ecuador

Puerto Rico

Egypt

Switzerland

England

Thailand

Germany

Trinidad

Japan

United States



IFPS Certifications

Fluid Power Specialist

- Hydraulic, Pneumatic and Electronic Controls.
- Analyzes and designs systems selects components instructs others in operations and maintenance.

Fluid Power Technician

- Mobile and Industrial Hydraulics and Pneumatics.
- Troubleshoots, tests, modifies systems and prepares reports.

Fluid Power Mechanic

- Mobile and Industrial Hydraulics and Pneumatics.
- Fabricates, assembles, tests, maintains, and repairs systems and components.

IFPS Certifications are valid for five (5) years, at which time recertification is required.

IFPS Certifications

Connector & Conductor

Fabricates, assembles, and tests hose and assemblies.

Engineer

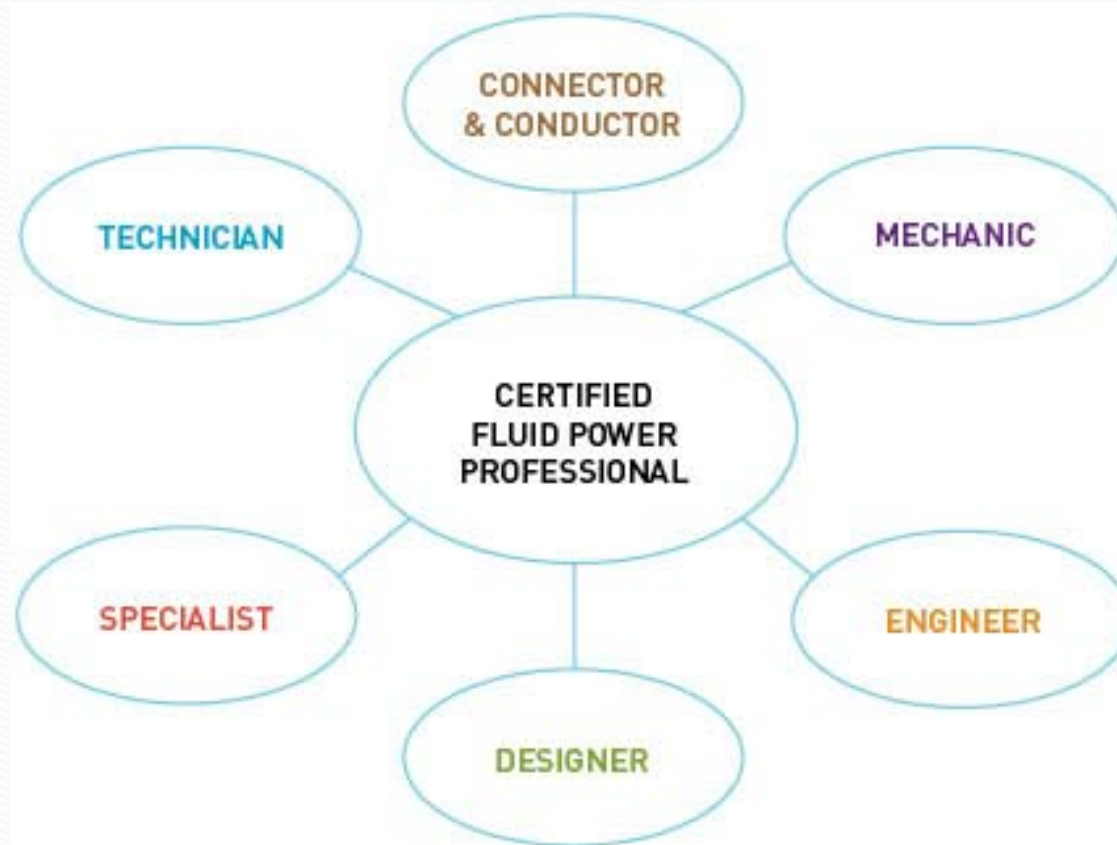
Experienced, system level hydraulic, pneumatic, and electronic controls expertise. Certified professional engineer license /degree equivalent.

System Designer

Experienced, system level hydraulic, pneumatic, and electronic controls expertise.

IFPS Certifications are valid for five (5) years, at which time recertification is required.

IFPS Certifications



All Certification Paths Lead to Professionalism



Fluid Power Safety

- Incidents involving injuries and even fatalities are a result of people working around hydraulic and pneumatic systems without understanding the related hazards. All IFPS certification study manuals include a general safety guide along with topic specific safety tips.
- In conjunction with the International Hydraulic Safety Authority, the IFPS offers free Safety posters and online Hydraulic Safety Awareness training courses. Upon successful passing of the course, Certificates of Completion are issued but are not to be confused with IFPS certification.

Component Manufacturers



EATON



HYDAC



Parker



Danfoss



SMC



Rexroth
Bosch Group



FESTO



HAWE
HYDRAULICS



Donaldson
FILTRATION SOLUTIONS



SUN hydraulics[®]
CORPORATION

Major Equipment Manufacturers



Why Get Certified?

- Certification establishes professional credentials and recognition from industry peers.
- Certification prepares individuals for greater on-the-job challenges and responsibilities.
- Certification reflects achievement, builds self esteem, enhances the public image of fluid power and demonstrates a commitment to the profession.
- Certification improves skills and knowledge leading to greater earnings potential, career opportunities and advancement.



What Fluid Power professionals are saying about IFPS certification

"Certification is a great way to build a career. I was fortunate enough to work for a company that required certification for advancement. From the first test to my last, I've never second guessed my decision to GET CERTIFIED."

Dean Houdeshell, CFPE, CFPAL- CemenTech

"I've been in the hydraulic world for 27 years and started certifying in 1987. I can't tell you how many times I've run into a problem troubleshooting all over the world and was able to resolve a problem due to the exposure to the particular."

Bob Sheaf, CFPE, CFPAL- CFC Industrial Training

"CFPS Certification provides a credential and insures the best path in learning practical hydraulics." Randy Bobbitt, CFPS, CFPHS- Danfoss Power Solutions

"Certification is a great way to document your training and it's also a life-long learning commitment that demonstrates your interest in career and professional development."

Steve West, CFPHS, CFPAL- Ivy Tech Community College





Questions?



Thank You