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What skills and abilities are required?

Guide to being a Boilermaker



To be successful in this trade, Mlungisi, you will need to be proficient in the following:

- *Active listening* – Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times
- *Time Management* – managing one's own time and the time of others
- *Equipment Selection* – determining the kind of tools and equipment needed to do a job
- *Quality Control Analysis* – Conducting tests and inspections of products, services or processes to evaluate quality or performance
- *Mathematics* – using mathematics to solve problems
- *Critical Thinking* – using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems
- *Equipment Maintenance* – performing routine maintenance on equipment and determining when and what kind of maintenance is needed
- *Speaking* – talking to others to convey information effectively

Once you have obtained a qualification and the relevant skills in this trade, you have CHOICES!

You can either find employment.  
**OR**  
Start your own business.

For more information, please contact the **merSETA** Call Centre on **086 163 7738**

For additional Support, you may also visit: **NYDA** [www.nyda.gov.za](http://www.nyda.gov.za)



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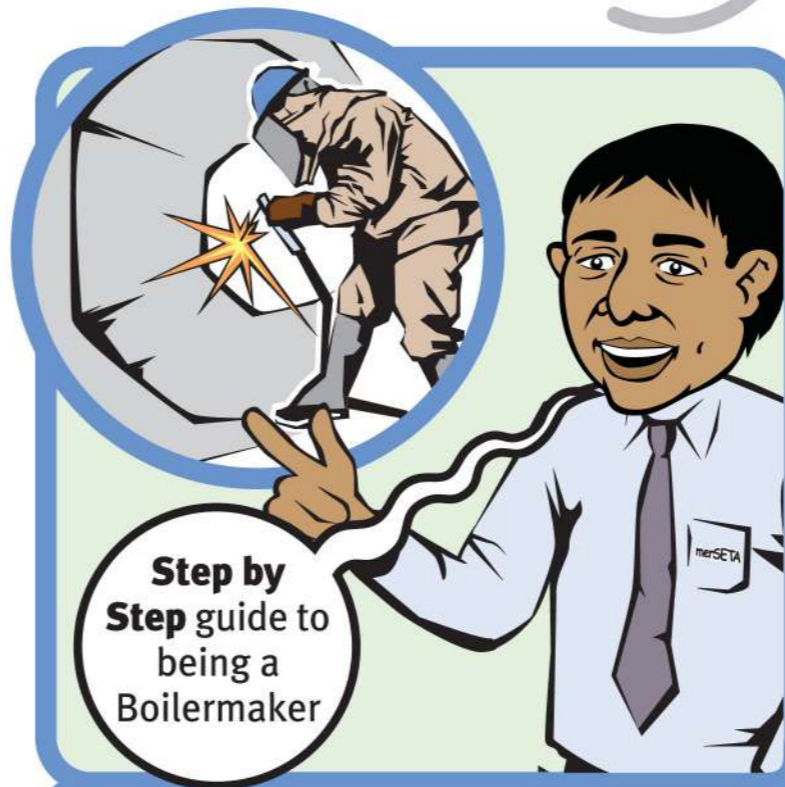
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Guide to being a  
**Boilermaker**



Step by  
Step guide to  
being a  
Boilermaker

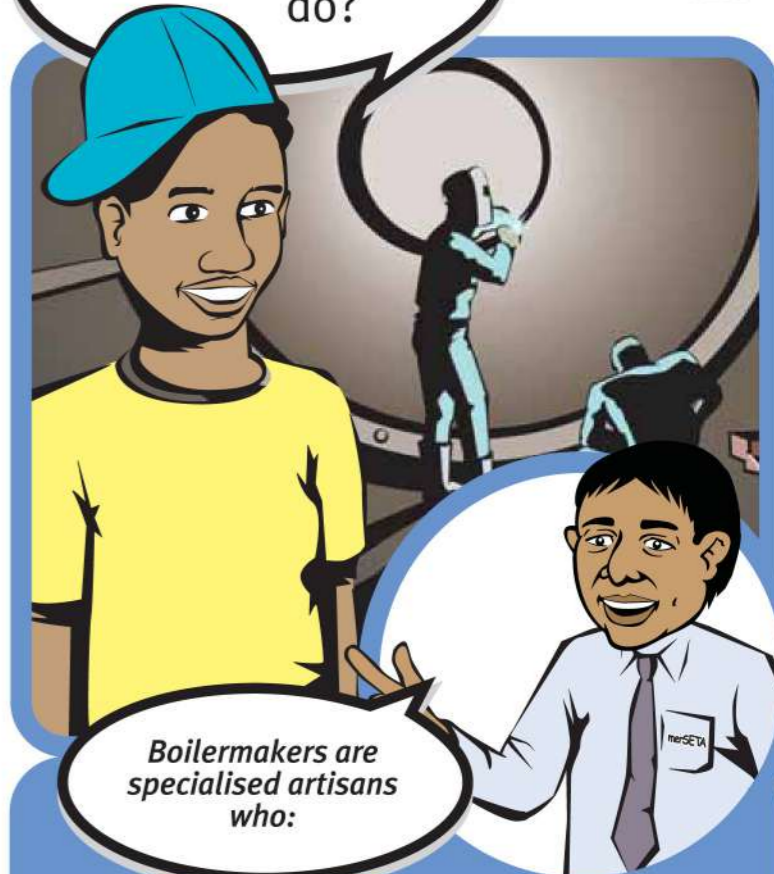
An essential guide showing learners how to prepare for their chosen careers

LEADERS IN CLOSING THE SKILLS GAP

1

What do  
**Boilermakers**  
do?

Guide to being a Boilermaker



Boilermakers are specialised artisans who:

mark off and fabricate structural steel and other metal stock to make or repair metal products and structures including boilers and pressure vessels

**3** What duties and tasks will I have to perform, Mr. Naidoo?

Guide to being a Boilermaker

The following points will help you to understand what is needed, Mlungisi ...

- Develops layout and plans sequence of operations for fabricating and assembling structural metal products, applying trigonometry and knowledge of metal
- Locates and marks bending and cutting lines onto work piece, allowing for stock thickness and machine and welding shrinkage
- Hammers, chips, and grinds work piece to cut, bend, and straighten metal
- Verifies conformance of work piece to specifications, using square, ruler, and measuring tape
- Reheats work pieces to render them malleable, using hand torch or furnace
- Positions, aligns, fits, and welds together parts, using jigs, welding torch and hand tools
- Sets up and operates fabricating machines, such as brakes, rolls, shears, flame cutters, and drill presses
- Sets up and operates machine tools associated with fabricating shops, such as radial drill, end mill, and edge planer
- Designs and constructs templates and fixtures, using hand tools

**4** What do I do before leaving school?

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Visit Boilermaker training centres and companies

What are the **minimum entry requirements?**

- Grade 9 with maths and science with Afrikaans or English Language
- Able to perform work of the trade
- At least 16 years old

NOTE: Some companies set higher entry requirements

**5** Mr. Naidoo, how do I apply for training?

Guide to being a Boilermaker

Check for advertisements for apprenticeships and learnerships

- Identify your area of interest
- Compile your CV
- Check for advertisements for apprenticeships/learnerships opportunities in newspapers or register on relevant database
- After finding an advertised opportunity, familiarise yourself with the company
- Send your application and prepare for interview if short listed

**6** What are the working conditions like, Mr. Naidoo?

Guide to being a Boilermaker

Mlungisi, your working environment is often noisy, this is something you will get used to, with the correct safety precautions

Most Structural Metal Fabricators or Boilermakers work in shops that are often noisy, but lighting and ventilation are generally good. The work requires constant physical activity. Most shops have modern equipment. Possible work hazards are flying metal chips, falling metal objects and burns from welding torches.