



Unit 26 Joining technology

Task 09

Announcer: Listen to Aniri and Lilly talking to their supervisor Mr Kaup.

Aniri: How are you? I'm really nervous. ... Do you think, we'll do a good job tomorrow?

Lilly: Actually, I don't have any idea. I'm nervous, too, but I'm looking forward for our first practical welding lesson.

Aniri: Me too, but today we have to hear a lot of theory, I hope it won't be too boring ... We've already become familiar with all the detachable connections, I suppose we're going to hear them again, but I'm really interested in learning about the fixed connections.

Lilly: You're right, me too, oh, look Mr Kaup, our supervisor, is coming.

Mr Kaup: Hello girls, how are you doing? Everything all right? Any problems?

Aniri: Hello, Mr Kaup. No, not really any problems, but we're quite nervous about tomorrow. We love our job, but welding still seems to be a job for "tough men". We've already learned quite a lot about detachable connections, but we're not really familiar with fixed connections, such as rivet connections, soldering, gluing and especially welding.

Mr Kaup: Don't worry, I'm sure you'll both do a great job. So let's start with some theory, it's important to know some basics about fixed connections:

Rivet connections are fixed connections, which connect two or more parts by inseting the rivet shank and by moulding a closing head over it. Blind rivets are accessible from one side and metal rivets from both sides.

Quick fastening systems are divided into three groups: snap fasteners, snap connections and quick fastening elements. Plug-in connections, clips and screws belong to the last group.

Metallic components are connected by soldering. The solder is a metal or metal alloy. Soldering processes are basic soldering up to 450°C, brazing at more than 450°C and high temperature brazing at more than 900°C.

Gluing is a joining process of equal or diverse materials by a precipitation hardening adhesive layer. Glues are characterized by composition and by the processing temperature. Glues characterized by composition are divided into one-component adhesives and two-component adhesives. Glues characterized by their processing temperature are divided into warm-bonding adhesives and cold-bonding adhesives.

Welding is a thermal joining process. Materials of the same kind are connected when exposed to heat.