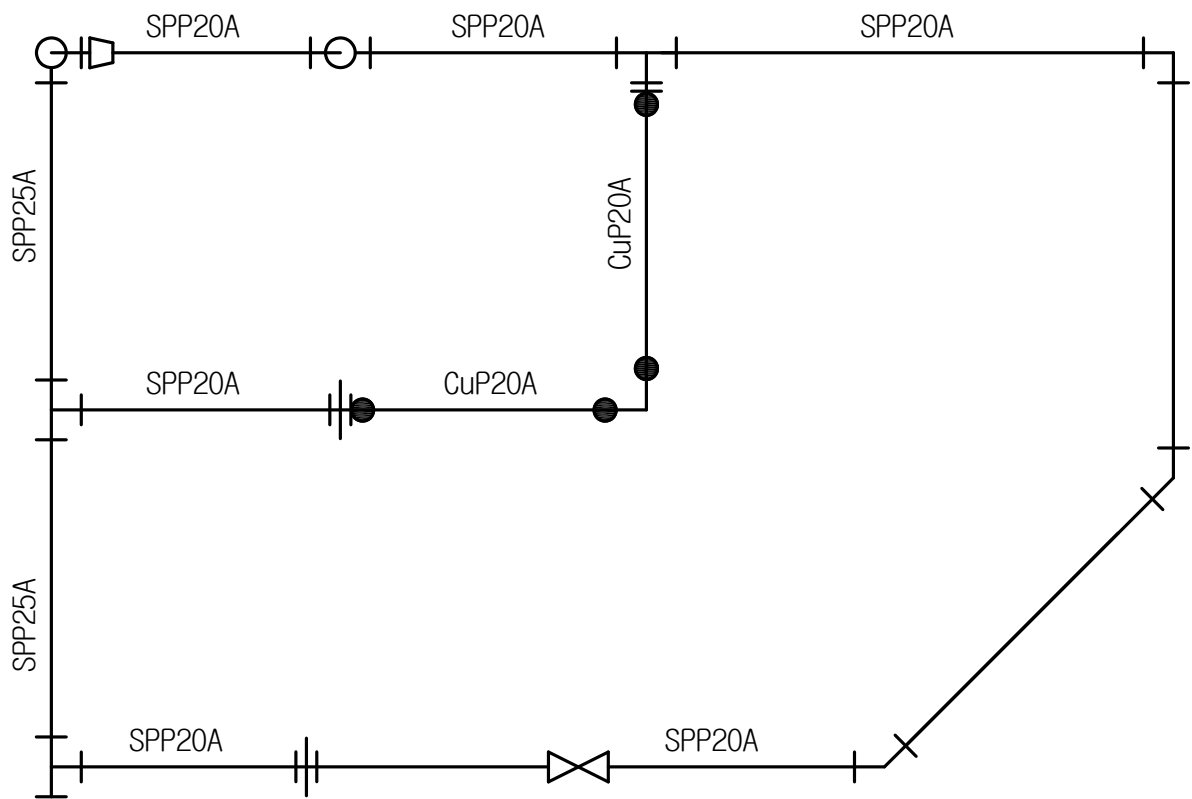


국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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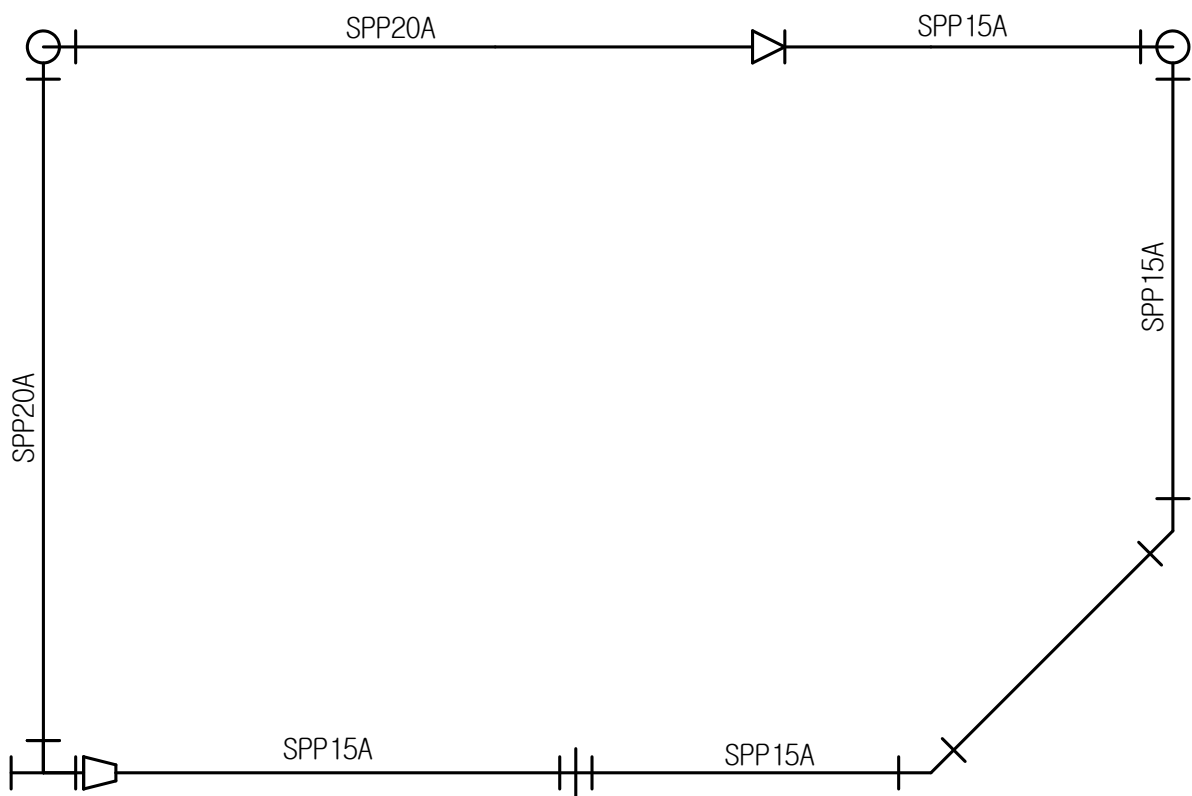
1. (1과제)배관 적산 도면



국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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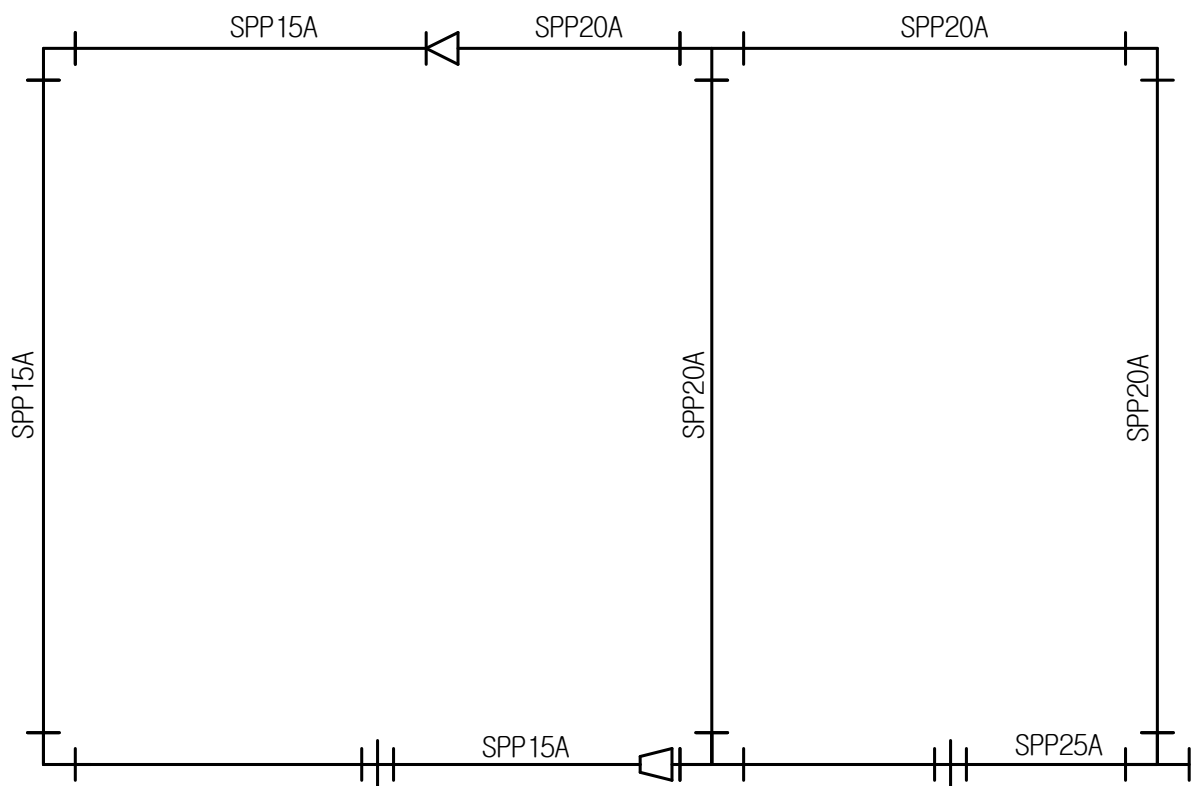
1. (1과제)배관 적산 도면



국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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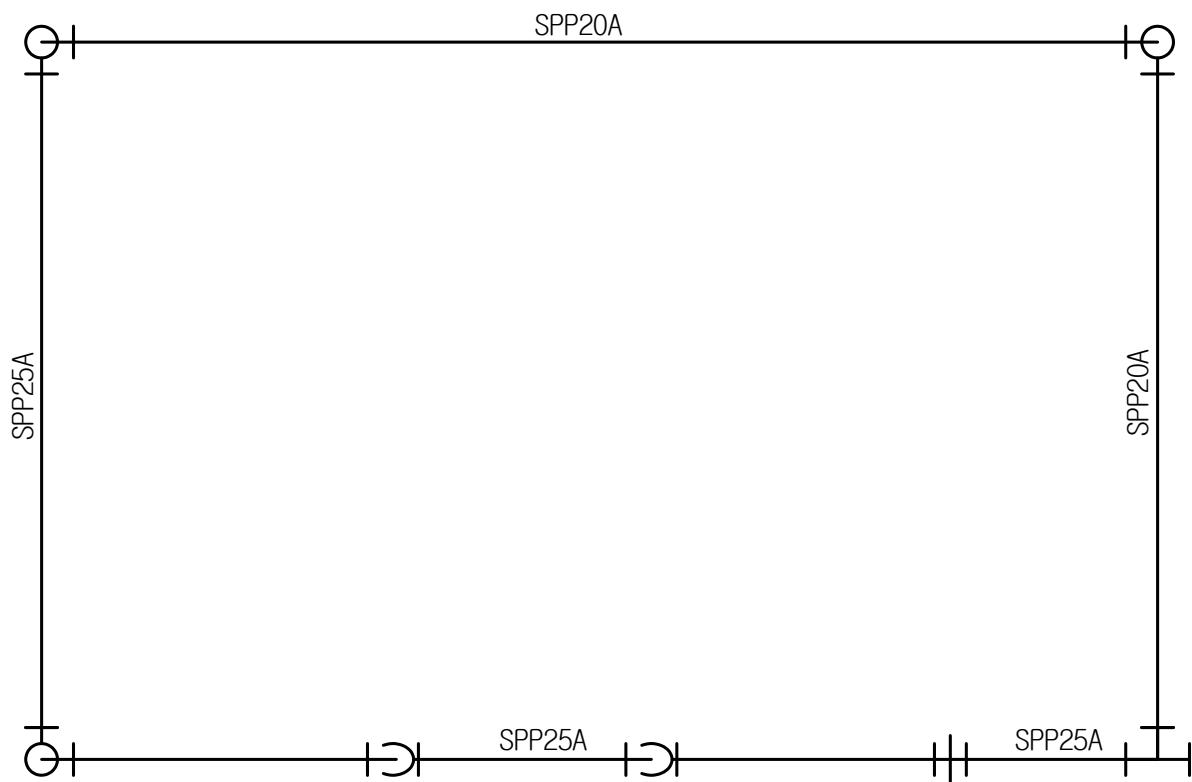
1. (1과제)배관 적산 도면



국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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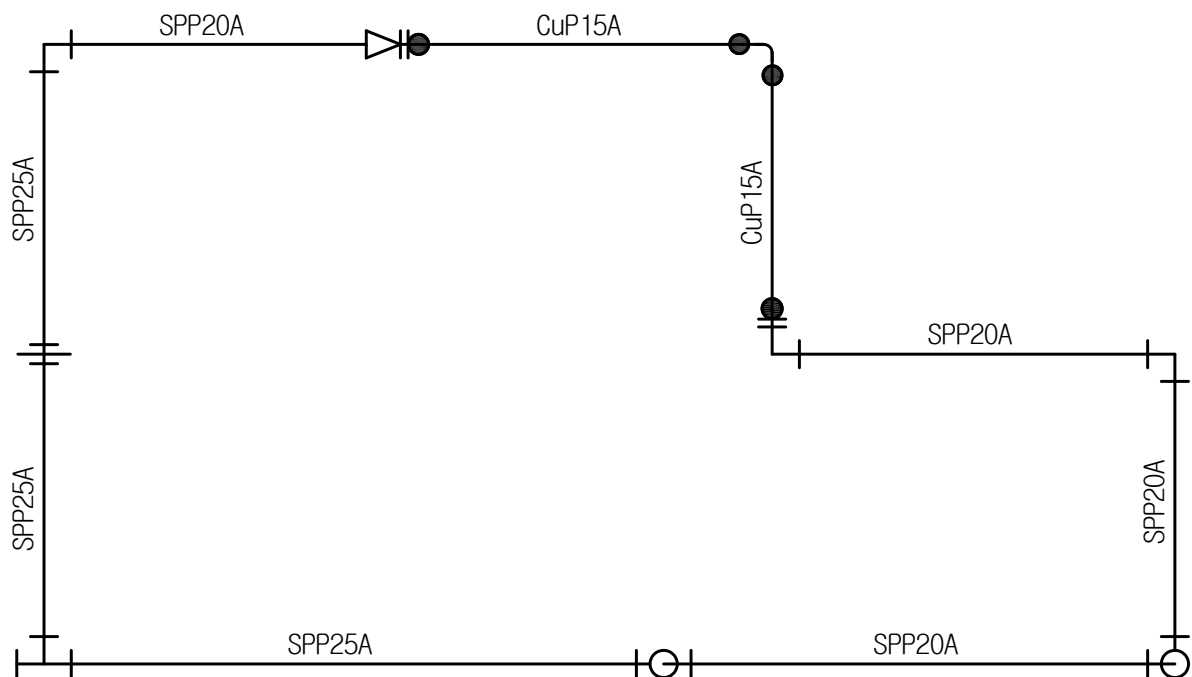
1. (1과제)배관 적산 도면



국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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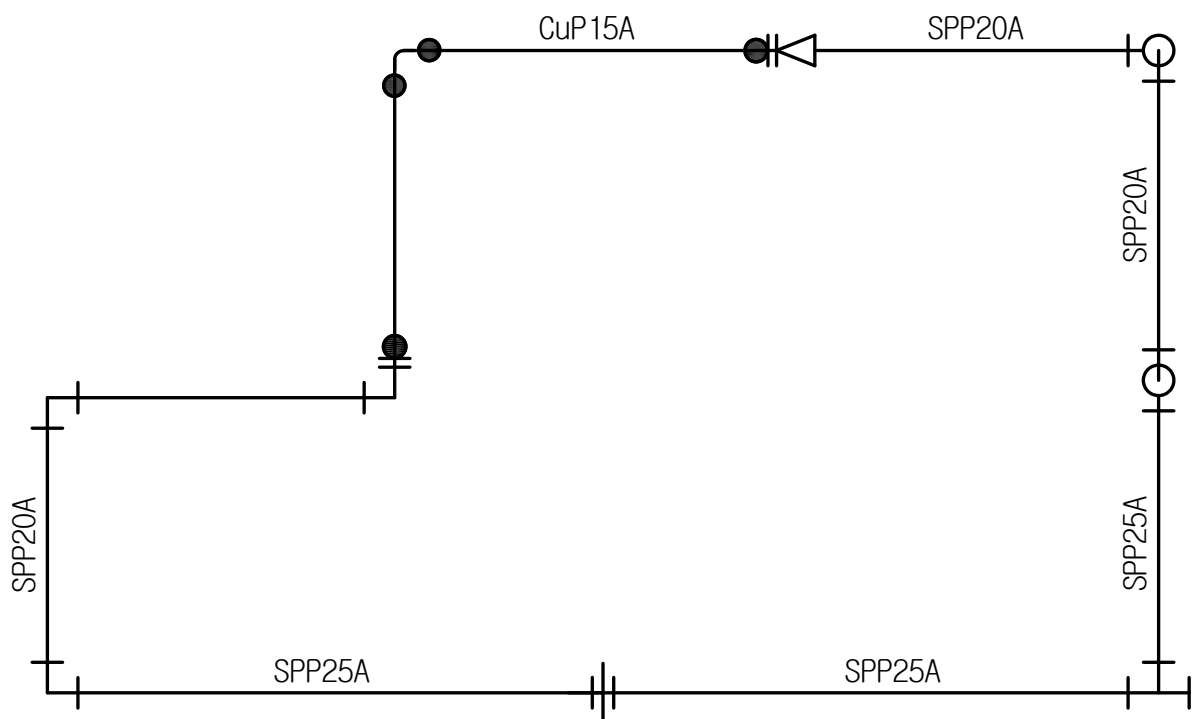
1. (1과제)배관 적산 도면



국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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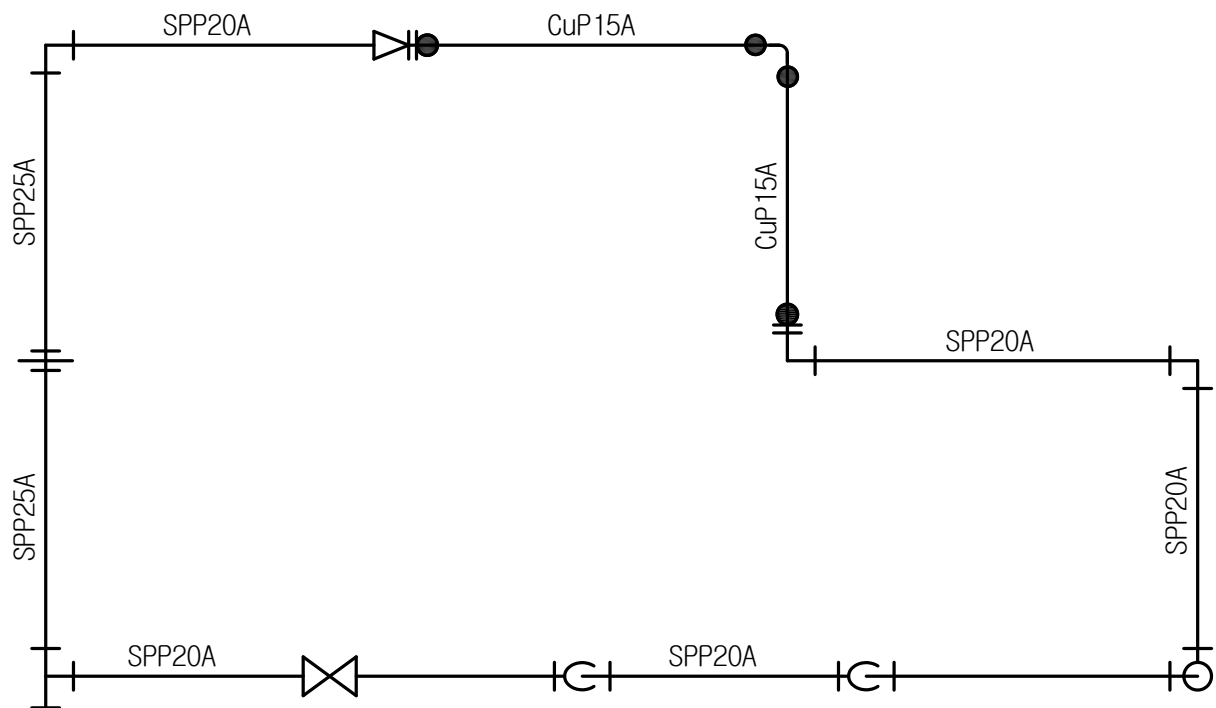
1. (1과제)배관 적산 도면



국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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1. (1과제)배관 적산 도면



자격종목	에너지관리기능사	과제명	배관 적산
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The diagram shows a closed-loop circuit with four main branches and two connecting branches. The top branch contains a switch and a battery labeled SPP25A. The right branch contains a diode, a battery, and a diode labeled SPP20A. The bottom branch contains a battery labeled SPP15A. The left branch contains a battery labeled SPP20A. A branch labeled CuP15A connects the left and bottom branches. Another branch labeled CuP15A connects the top and bottom branches.

자격종목	에너지관리기능사	과제명	배관 적산
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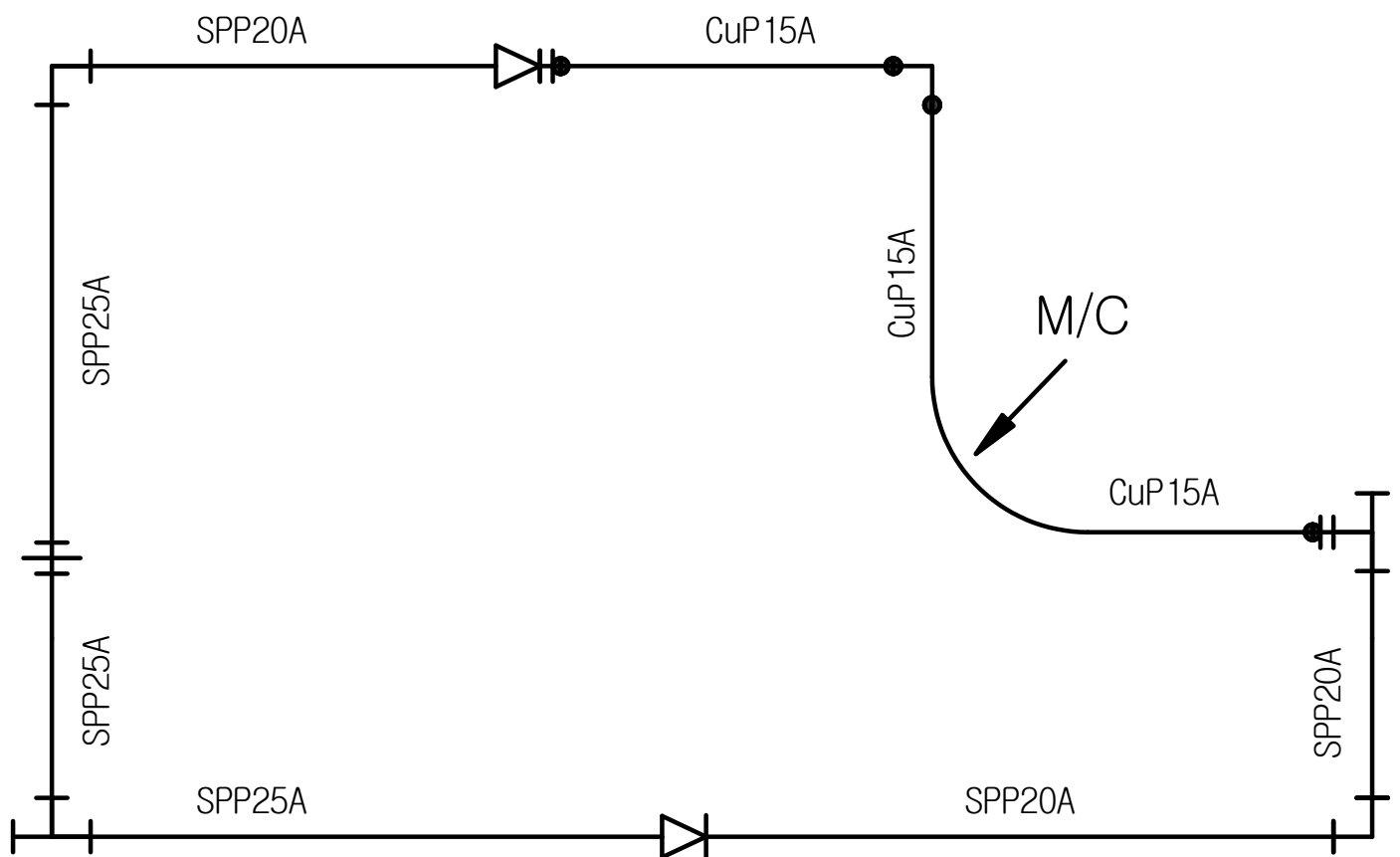
The diagram illustrates a power distribution network (PDN) layout. It features a main loop with a diode and a 90-degree bend. The components and their specifications are as follows:

- Top Horizontal Segment:** Labeled **SPP20A**.
- Right Vertical Segment:** Labeled **SPP20A**.
- Bottom Horizontal Segment:** Labeled **SPP20A**.
- Left Vertical Segment:** Labeled **SPP25A**.
- Diode:** Located on the bottom horizontal segment, pointing to the right.
- 90-degree Bend:** Located on the top horizontal segment, with a radius labeled **R80**.
- CuP15A:** Two labels indicating the material and thickness of the conductive paths.

국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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1. (1과제)배관 적산 도면



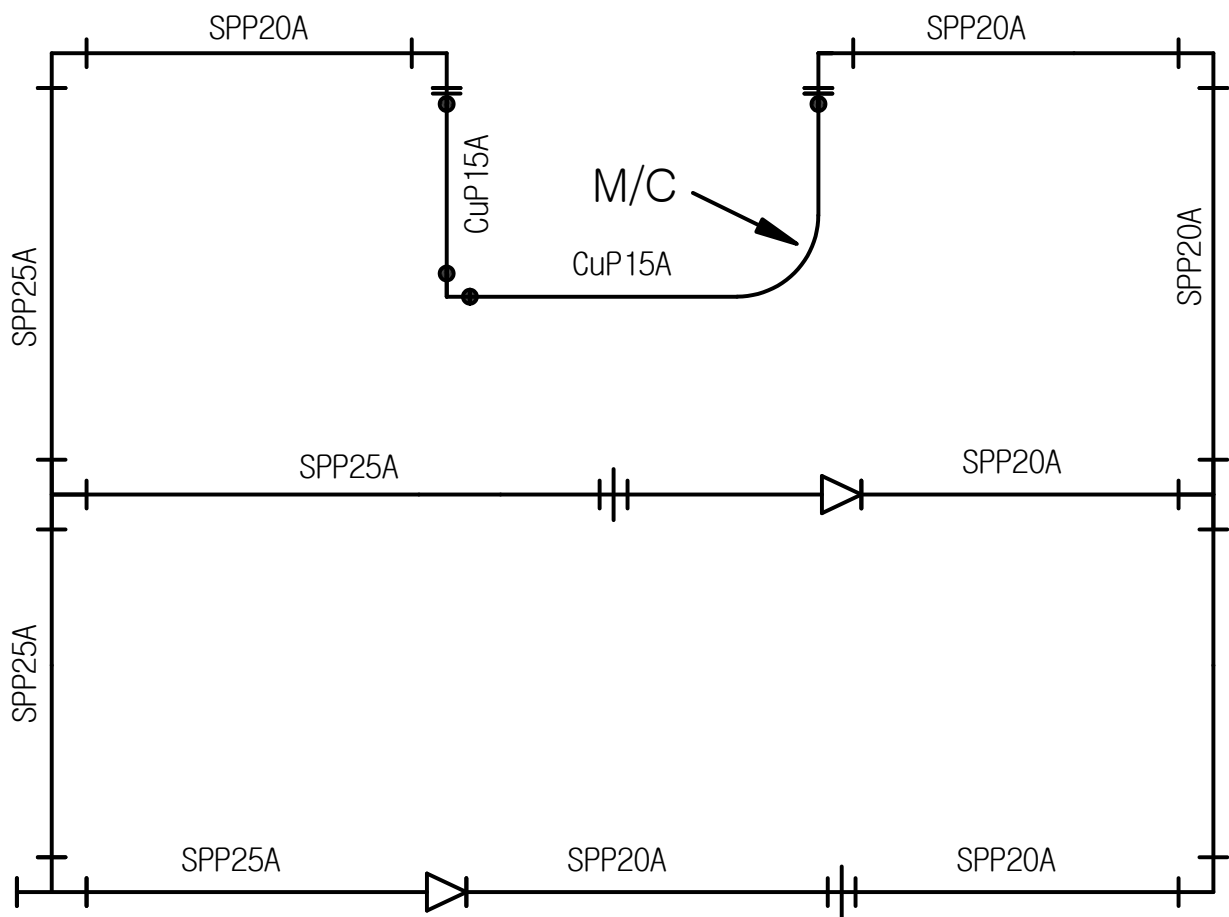
자격종목	에너지관리기능사	과제명	배관 적산
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The diagram illustrates a power distribution system for a 100W LED lighting fixture. It features a main power line (SPP25A) entering from the bottom left, which branches into two parallel paths (SPP20A) that feed two separate LED modules (M/C). Each module is protected by a 15A fuse (CuP15A). The return lines for each module are labeled SPP20A, and the main return line is labeled SPP25A. A ground symbol is shown at the bottom right.

국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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1. (1과제)배관 적산 도면



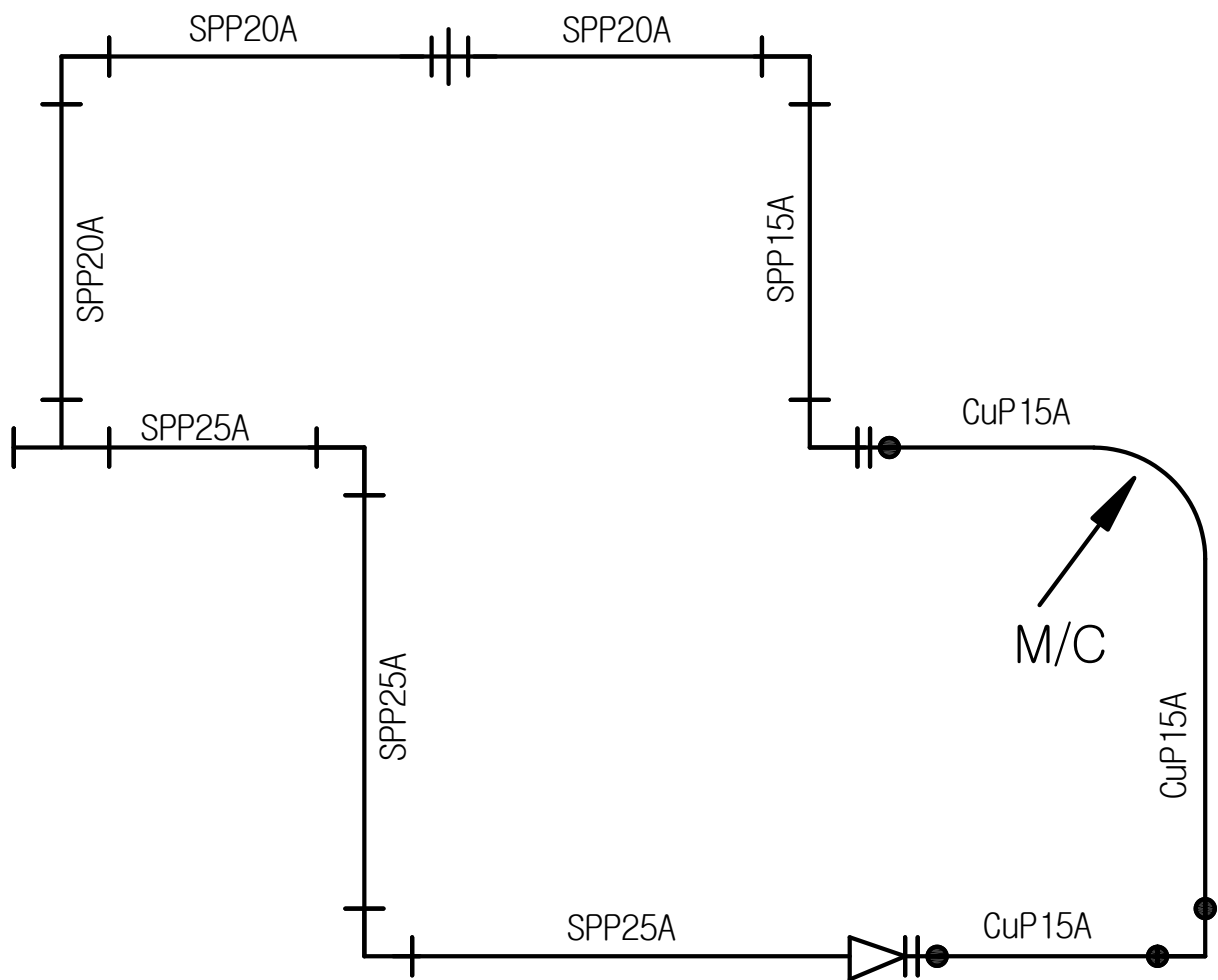
자격종목	에너지관리기능사	과제명	배관 적산
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국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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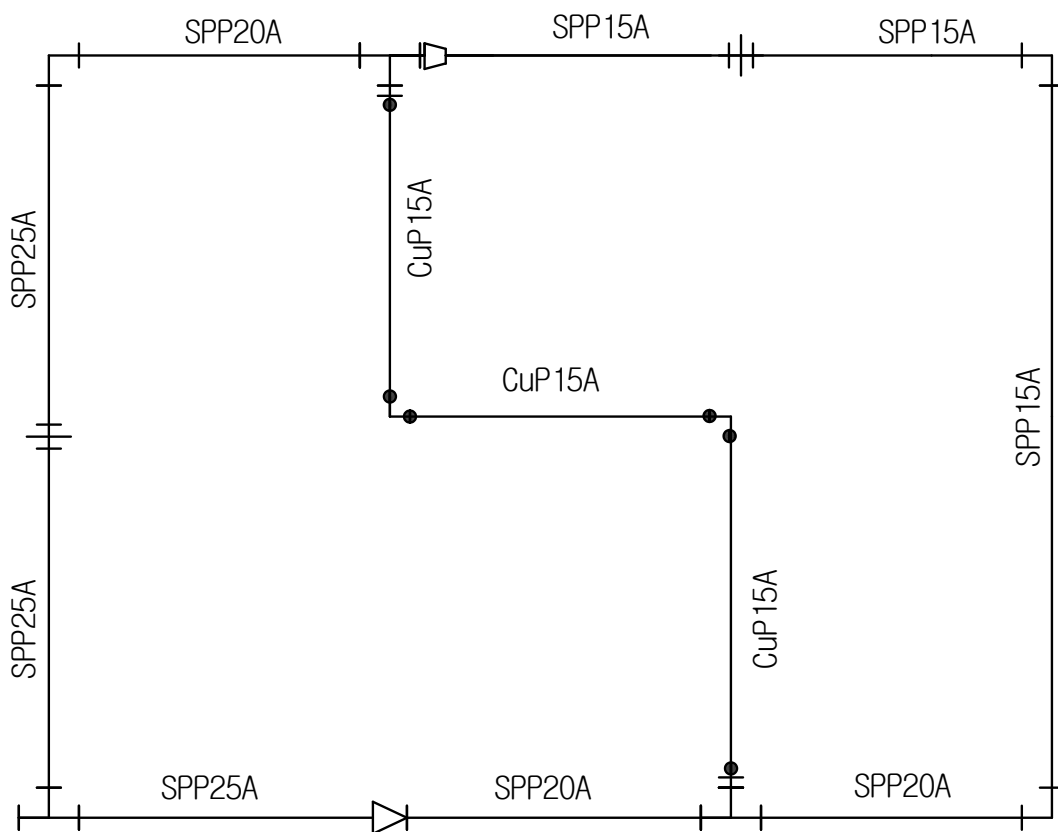
1. (1과제)배관 적산 도면



국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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1. (1과제)배관 적산 도면



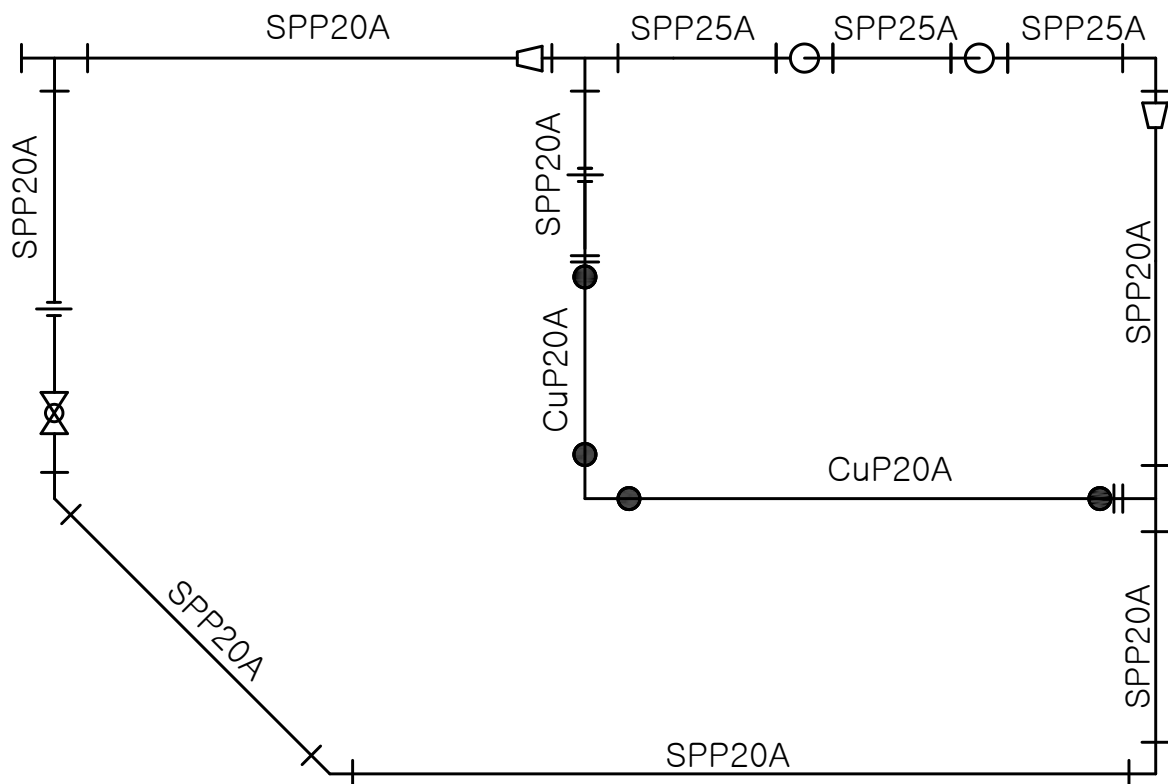
자격종목	에너지관리기능사	과제명	배관 적산
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The diagram illustrates a water distribution network with three parallel paths. The top path consists of four SPP20A pumps connected in series. The middle path consists of two CuP20A pumps connected in series. The bottom path consists of two SPP20A pumps connected in series, followed by a valve. All three paths converge at a single point on the right side of the diagram.

국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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1. (1과제)배관 적산 도면

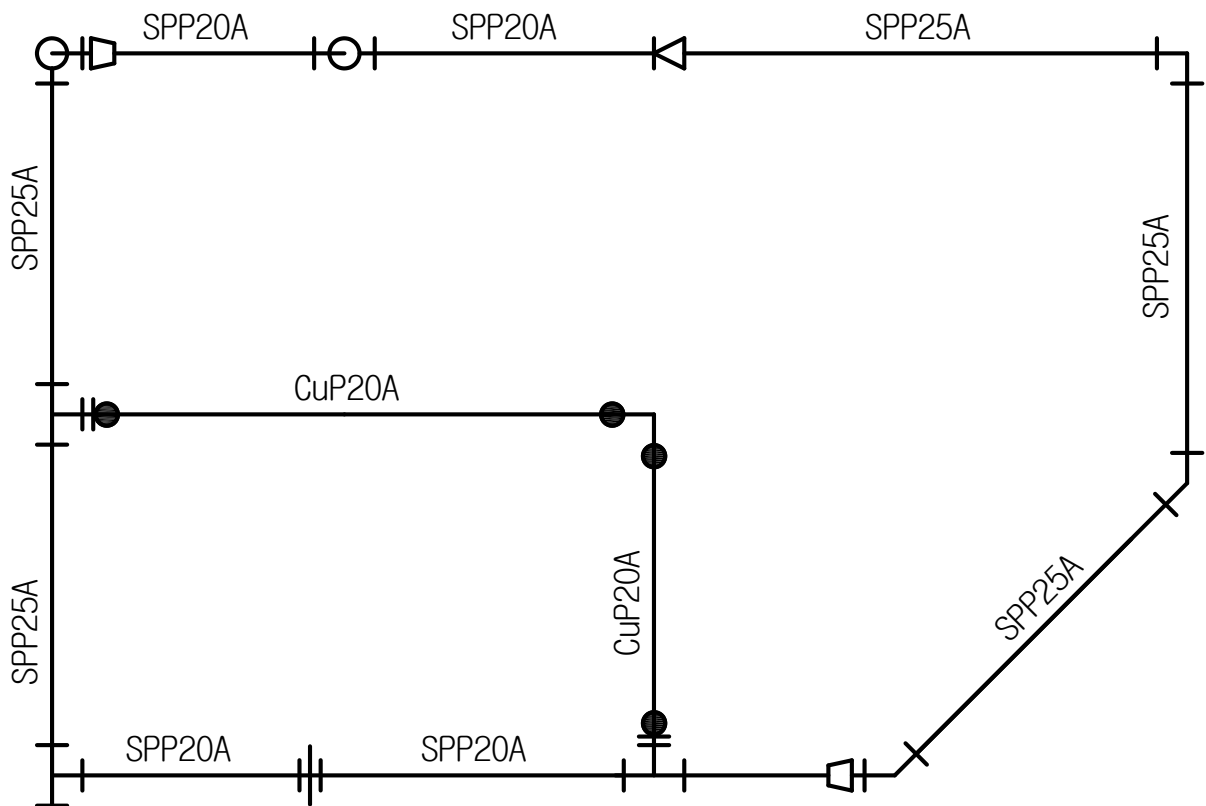


자격종목	에너지관리기능사	과제명	배관 적산
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국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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1. (1과제)배관 적산 도면

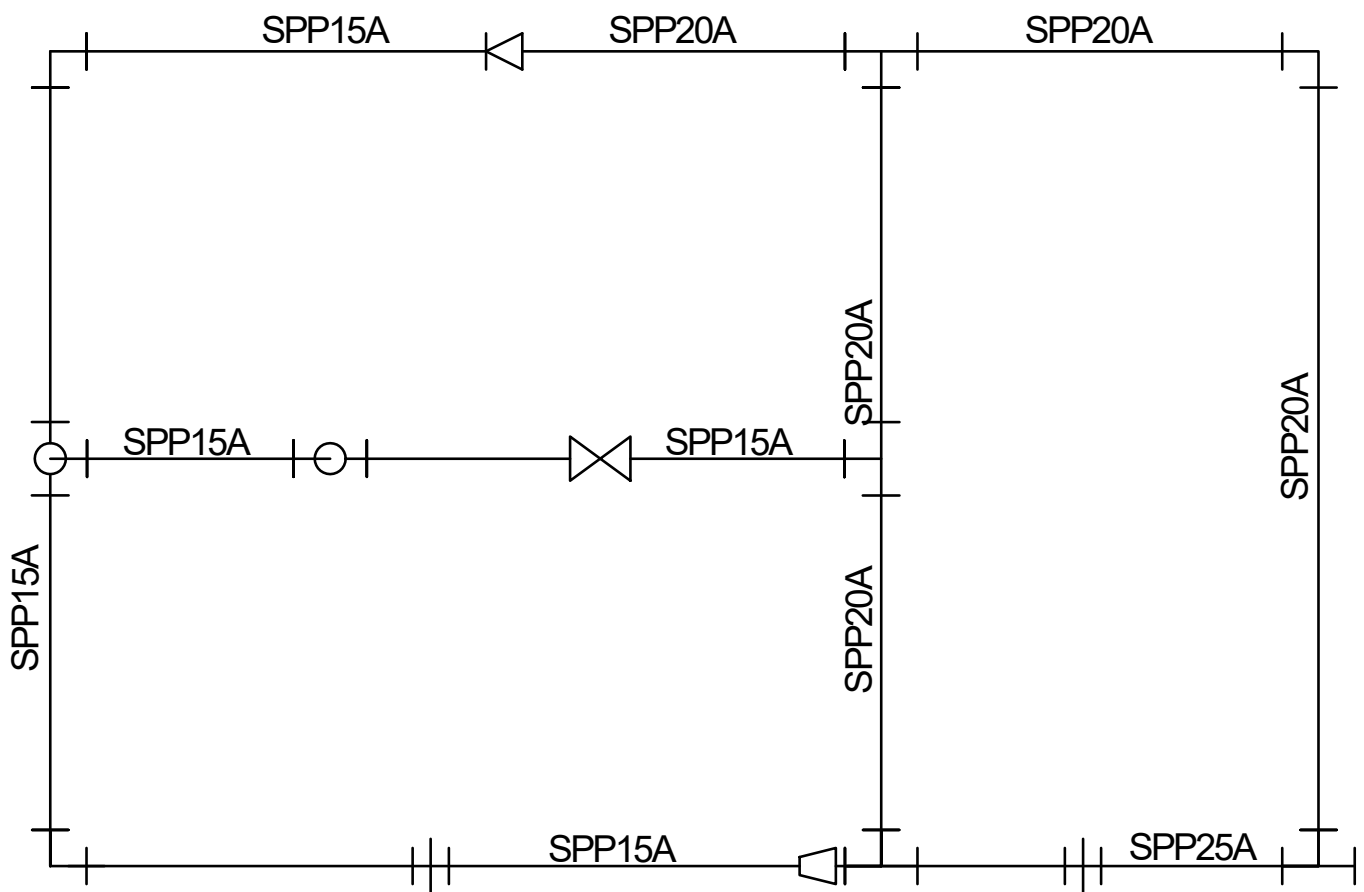


자격종목	에너지관리기능사	과제명	배관 적산
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국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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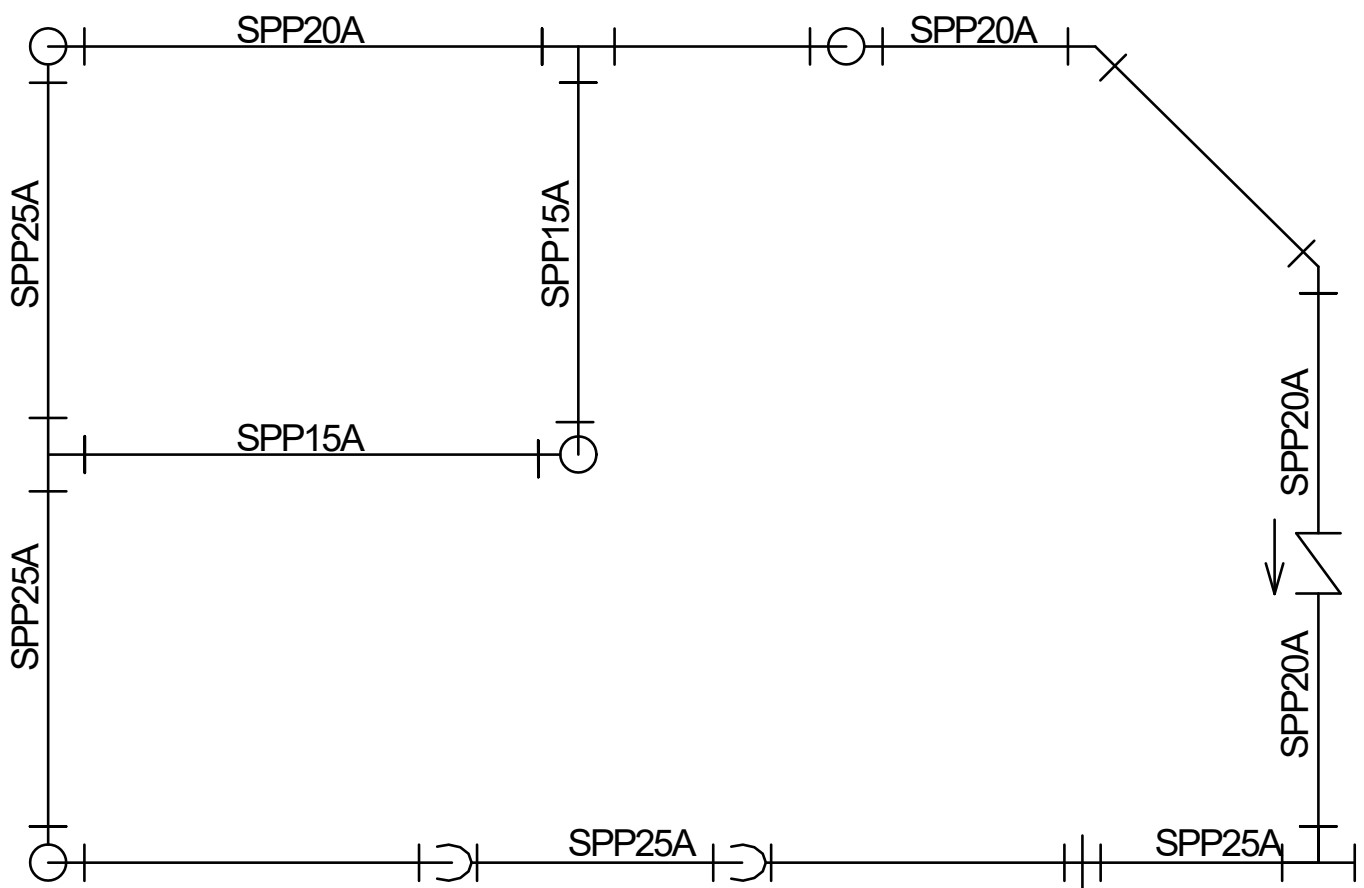
1. (1과제)배관 적산 도면



국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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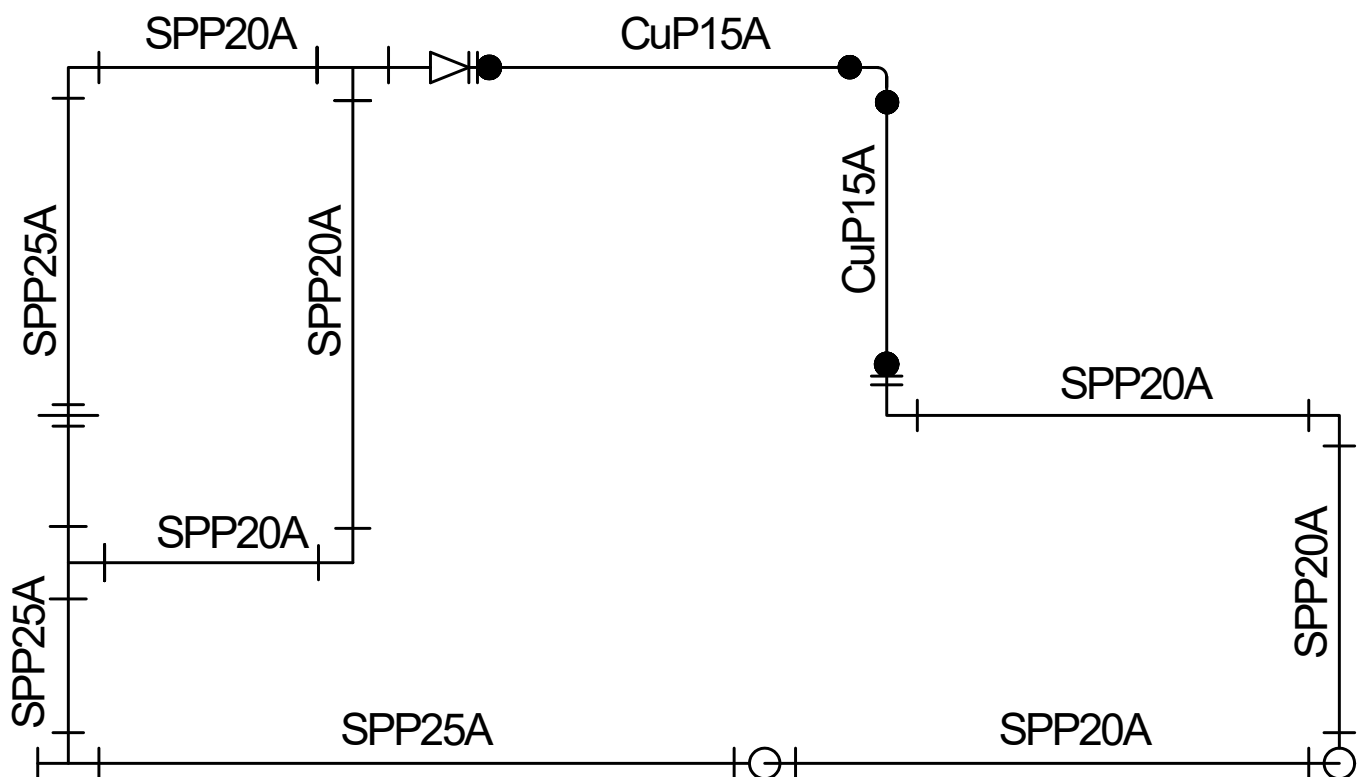
1. (1과제)배관 적산 도면



국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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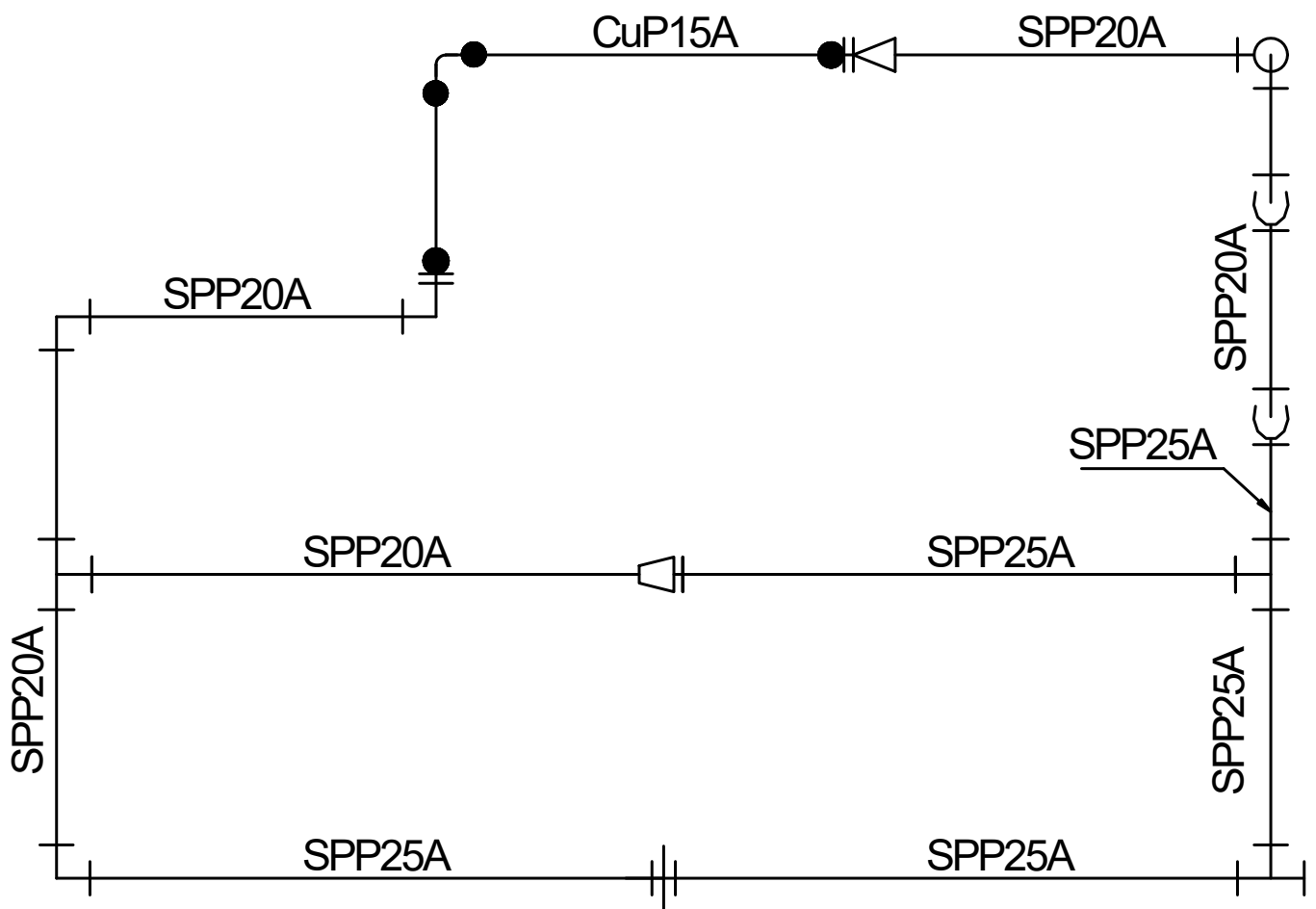
1. (1과제)배관 적산 도면



국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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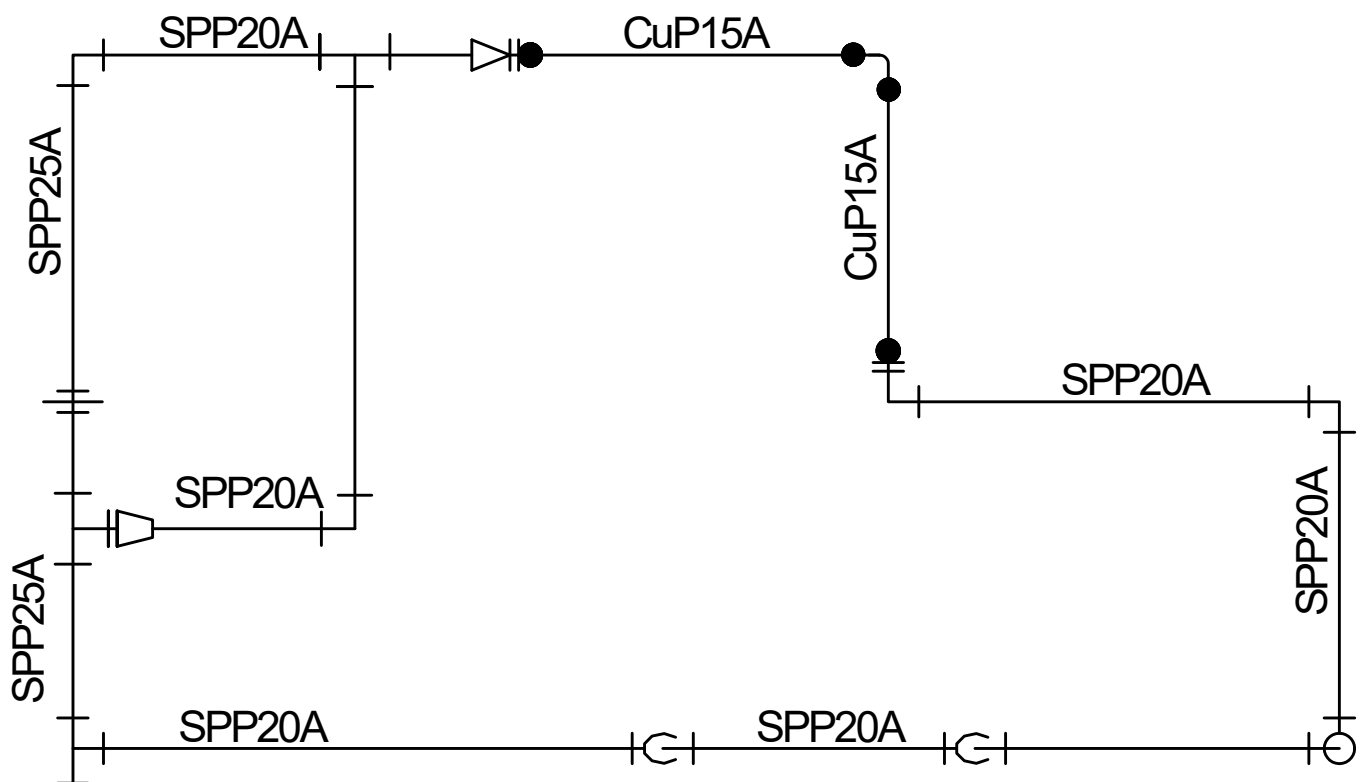
1. (1과제)배관 적산 도면



국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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1. (1과제)배관 적산 도면



자격종목	에너지관리기능사	과제명	배관 적산
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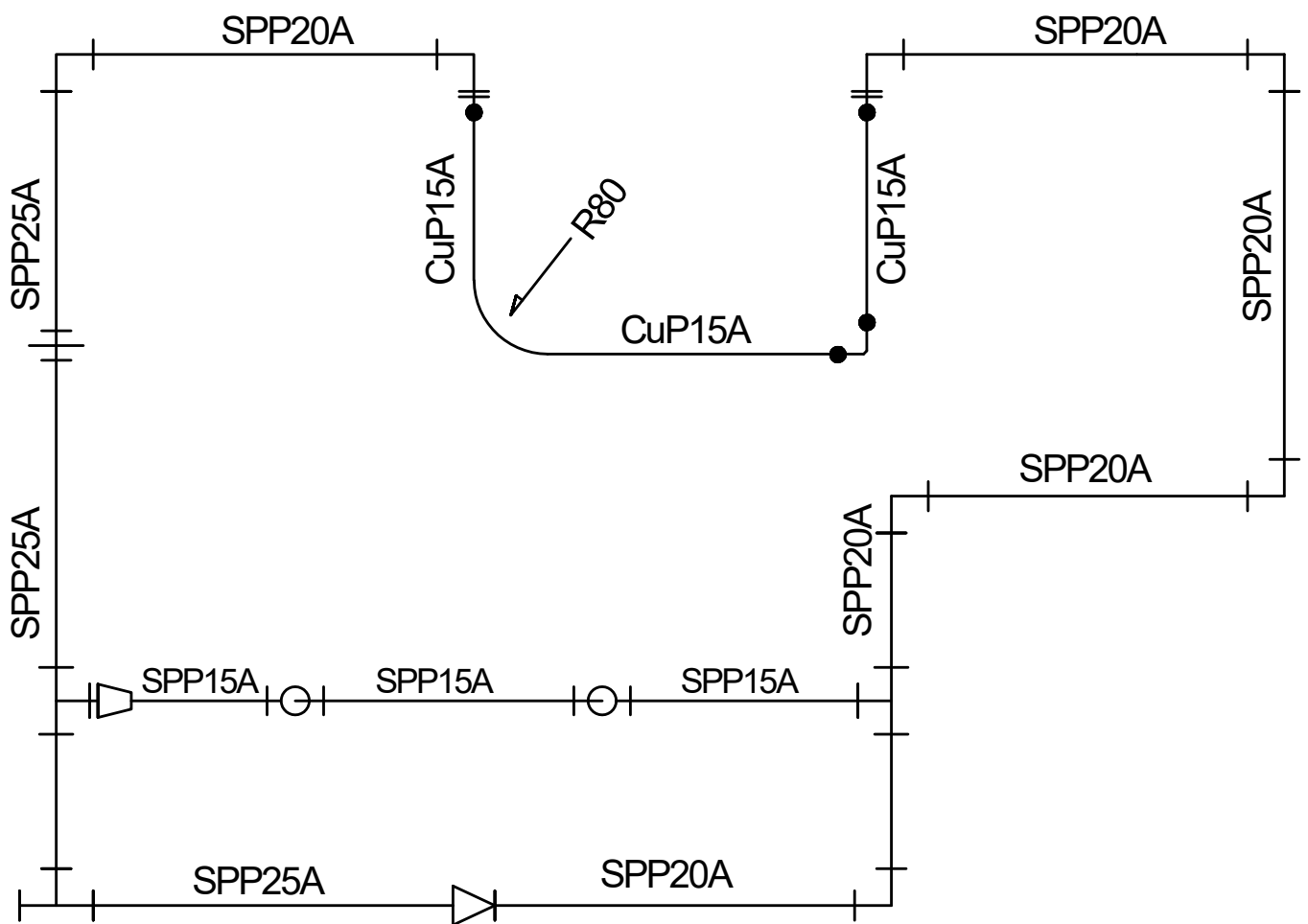
The diagram shows a power distribution network with the following components and connections:

- Top Horizontal Bus:** Labeled **SPP25A** at both ends. It contains a switch in the middle.
- Left Vertical Bus:** Labeled **SPP20A**. It has a connection point for a **CuP15A** cable.
- Bottom Horizontal Bus:** Labeled **SPP15A** at the right end.
- Right Vertical Bus:** Labeled **SPP20A** at the top and **SPP15A** at the bottom. It contains a diode pointing downwards.
- Internal Vertical Buses:**
 - A central vertical bus labeled **SPP15A** with two connection points (circles) to the top and bottom horizontal buses.
 - A lower vertical bus labeled **CuP15A** connected to the left vertical bus and the central vertical bus.
- Connections:** Solid dots indicate connection points where the **CuP15A** cable meets the other buses.

국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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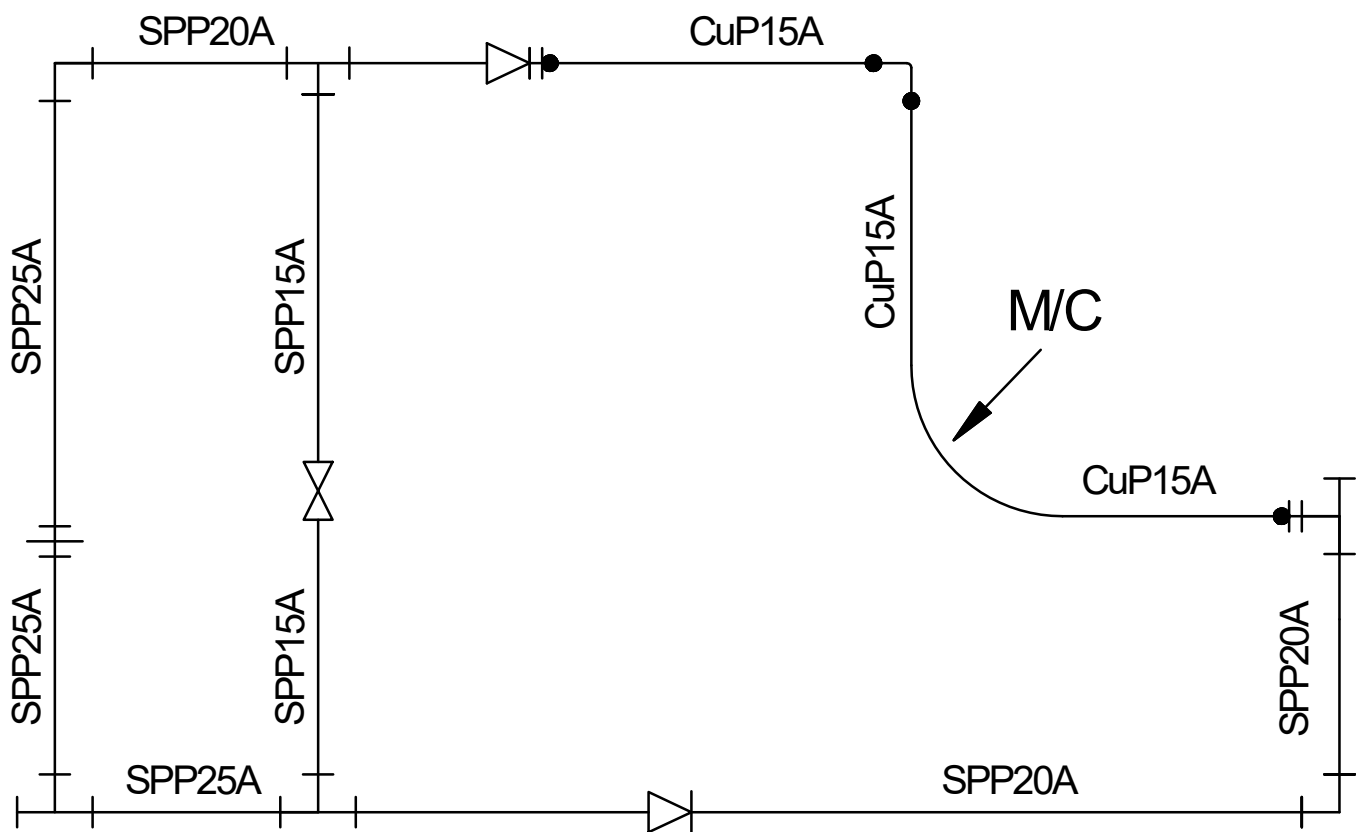
1. (1과제)배관 적산 도면



국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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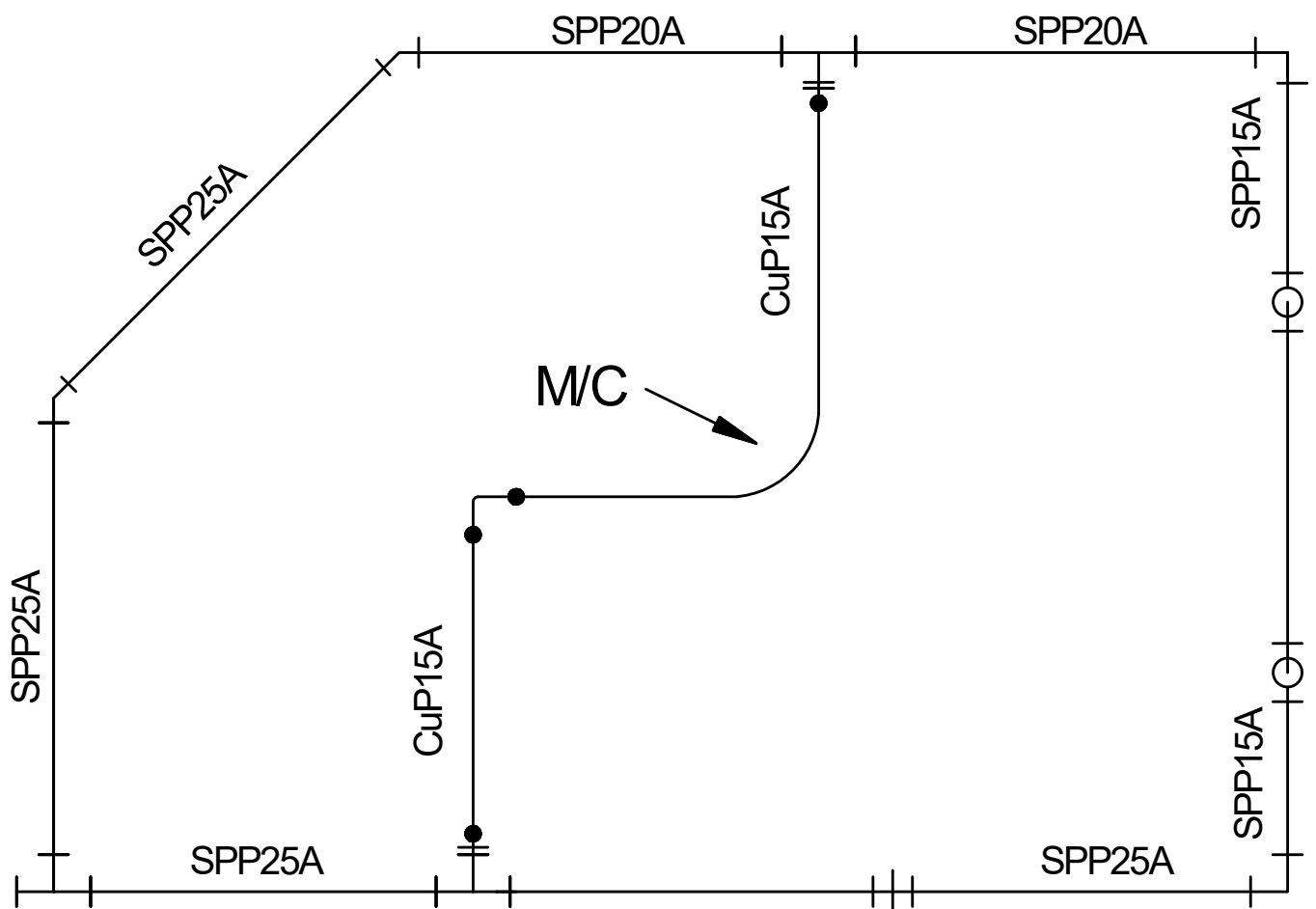
1. (1과제)배관 적산 도면



국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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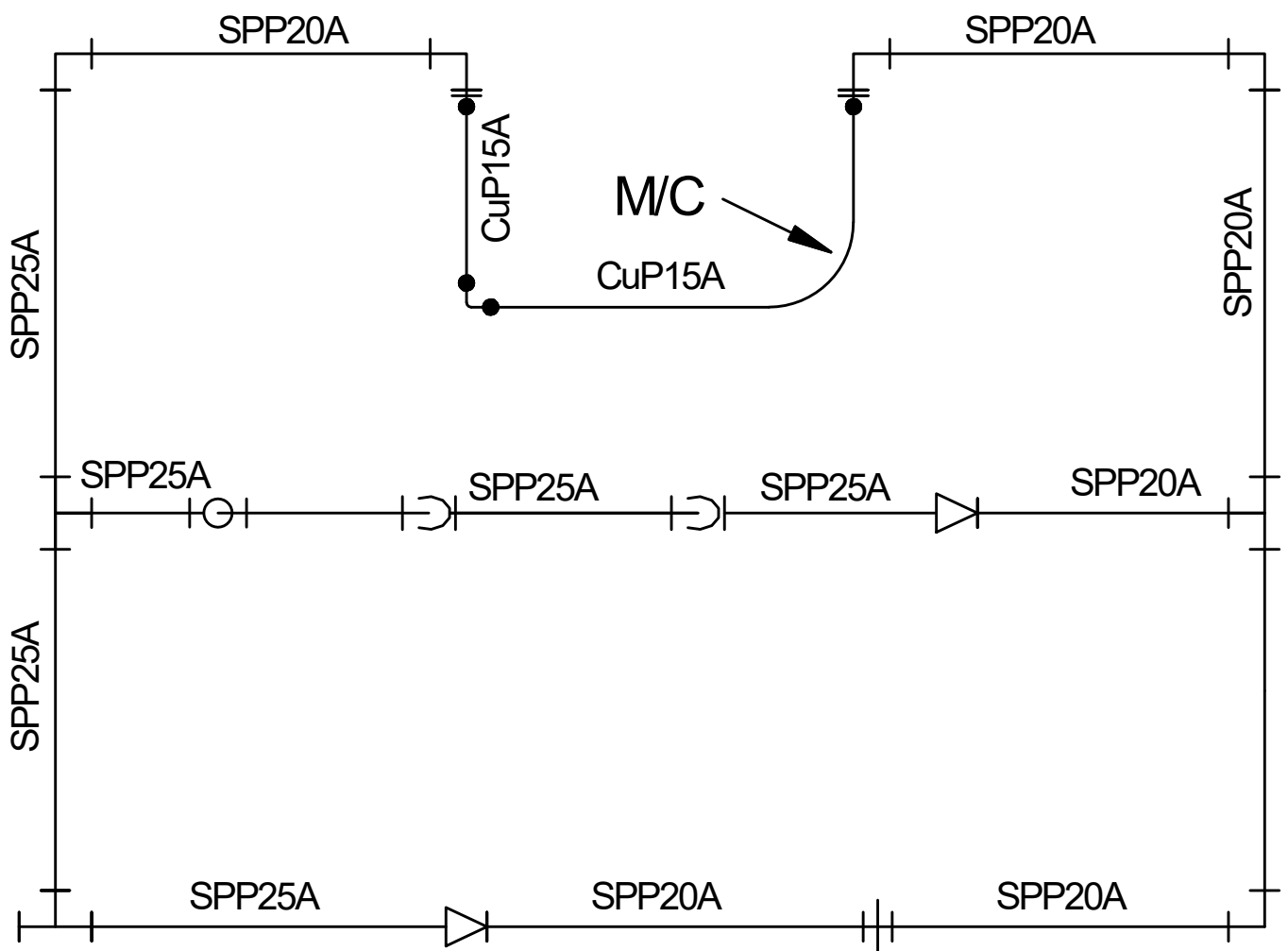
1. (1과제)배관 적산 도면



국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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1. (1과제)배관 적산 도면



국가기술자격 실기시험

자격종목	에너지관리기능사	과제명	배관 적산
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1. (1과제)배관 적산 도면

