

Evil 198

Chapter 198 - 198: Vanadis 8.

Rasmus looked at the wagons in front of the foundry to smelt the ores, but he wasn't planning to smelt them yet. He unloaded all the ores on the ground, and that attracted everyone's attention, including Javi and the others. Javi and Carrion helped Rasmus and Aris unload the ores, wondering why Rasmus had bought tons of ores that would be enough to make hundreds of swords and armor.

After they unloaded all the raw ores, Rasmus walked to the smithy and borrowed the grinding stones from the blacksmith and porcelain plates. He used the streak test on each raw ore to see the powders it had left behind in the porcelain. It was a common method that everyone already knew, and then Aris, Javi, Carrion, and Daryus did the same thing to help him.

They separated the raw ores from their color under Rasmus's order, and it took a while for them to finally group them based on colors. Hematite and Vanadinite had a dark brown color, Coal, Magnetite, Titanomagnetite, and Graphite had a black color, Molybdenite had a dark silver color, and lastly, Chromite had a dark gray color.

Rasmus told Daryus and Carrion about the different colors of the powders which distinguish what kind of ore it was. It was a bit hard to distinguish from the powders the ores produced on the porcelain, but thanks to Rasmus and Javi's knowledge about ores, they could help the others to separate which was Iron and which was Carbon.

"What about these? It has a crystal on it," Carrion showed the dark brown ore in his hand with small crystals on it.

"That's the one that I'm looking for. It's called Vanadinite," Rasmus looked at the ore in Carrion's hand. "I need you and Daryus to find ores like that from the pile," he pointed at the dark brown ore pile.

Daryus and Carrion nodded and immediately went to the pile to find a similar ore to what Carrion held in his hand. Aris and Javi already knew their tasks and separated which was to make iron and carbon. Rasmus on the other hand was focused on searching for Titanomagnetite, Chromite, and Molybdenite since they weren't common for smithing in this time and age.

Rasmus used the solutions that he bought from the alchemist, and it was hydrogen peroxide that he made from the solutions bought. He poured it on all the ores one by one until he saw the reaction on

the ore and what kind of color they produced. Aris and Javi were confused as to why he poured solutions on the ores, but when they found out that each ore produced different reactions and colors, they realized how amazing Rasmus's knowledge was.

Thalior and Altair watched from the side when they heard about Rasmus buying tons of raw ores. They were admiring Rasmus's skill and how to distinguish each raw ore using solutions. They wanted to join in and asked him, but they held back and decided to observe.

Once all the raw ores had been separated and identified, Rasmus brought the Hematite and Magnetite to the furnace to smelt them using coal. He personally handled the smelting, standing in front of a hot furnace like it was nothing. It reminded him back when he made his knives in his past life when he was a mercenary, and he also watched and learned from blacksmiths as a hobby when he was getting old.

After he managed to create a lot of iron ore, he continued smelting Chromite. Since this world didn't have the technology or material to do a high-heat reduction smelting to take away the oxygen, he used his skill as a mage. During the smelting process, he took away oxygen using Mana from the Chromite.

"What are you doing?" Aris asked with her arms crossed, staring at Rasmus's hand pointed at the furnace.

"I'm taking away the oxygen from the ore to purify the ore into something that I desire," Rasmus answered as he focused on extracting the oxygen from the Chromite. "All the processes are needed to create the best weapon. Just wait..." he added as he kept his focus on the furnace since it required his concentration to keep the heat high while at the same time taking the oxygen from Chromite which wasn't an easy task.

The first two tries were failures as the Chromium broke down and turned into dust. He knew it wouldn't be an easy task which was why he bought a lot of raw ores. He didn't give up and only smelt Chromite in a small amount to avoid wasting resources.

After a few more tries he managed to get pure chromium, and when he showed it to everyone, they were in awe of its shiny silver color. They thought it was silver, but they felt different and much brighter. They were playing with the chromium and had never seen anything like that before.

Rasmus then continued to smelt Vanadinite which was the hardest process since there were so many steps that he needed to take. First he smelted the Vanadinite with Carbon from Coal and Graphite and also added limestone during smelting. It required extreme heat to melt all the materials which he used Mana to get the heat he desired.

After he managed to smelt them and turn them into liquid. The bottom part was where the slag of the hot metal created Vanadium later on. He brought oxygen into the liquid metal to separate the slag from the rest. Once he managed to extract the slag, he used the solution which was sulfuric acid, and dipped the slag inside it.

After he managed to dissolve the Vanadium in the acid while the remaining slag was still sold, he put the Vanadium back into the furnace and added calcium from where he used the limestone from earlier that had turned into calcium.

Everyone was baffled by how he did all those troublesome steps for a mere metal. They didn't know what it was, but based on how hard and precise it required, that metal would be the most expensive one and the main component of the weapon that Rasmus was trying to make.

While waiting, Rasmus focused on extracting Molybdenum from Molybdenite using solutions that he had prepared. He dipped the Molybdenite into the solution, creating bubbles that would extract Molybdenum from Molybdenite. Once he extracted the Molybdenum, he heated it with carbon until it solidified.

When the Vanadium and Molybdenum were cooled off, everyone looked at both metals that had bright shiny silver colors. They didn't understand it at all since they both looked the same with naked eyes, but seeing how both were produced in a totally different process, they knew they weren't the same.

"Got quite a lot from all that..." Rasmus looked at the Vanadium and Molybdenum on the buckets. "Now, it's time to turn all the materials into powders, so I'm going to ask you to turn them into powders for me, Aris," he looked at Aris as he wiped the sweat on his forehead.

Aris raised her brows and grabbed the handful of Vanadium. When she put enough pressure to crush a steel, she was shocked by how soft it was and broke easily. She looked at Rasmus with doubt because it didn't feel like a great material to make a sword, but she didn't say a word and began to crush all the materials into fine powders with her ability.

Nobody knew about Powder Metallurgy which wasn't surprising that everyone found the whole process unnecessary. Powder Metallurgy was an advanced technique that made the final product had high hardness, wear resistance, and toughness.

After each bucket was filled with different metals, Rasmus began to scale them on the scaler. He precisely put 80% powdered iron, 2,3% powdered Carbon, 8% powdered Vanadium, 4,8% powdered Chromium, and finally 1,8% powdered Molybdenum for each kilogram since it was easier to calculate.

Once Rasmus carefully mixed all the materials evenly in a small bucket, he put them in the furnace and created a vacuum space to prevent oxygen from going in. He heated the mixed material until it solidified with various methods like sintering. Everyone watched his craftsmanship from up close, and they didn't know how good he was, but Rasmus wasn't good at making swords which he would let Aris handle in the final process.

"It's done..." Rasmus pulled out the hardened Vanadis 8 plate from the furnace. "Now, we just need to let it cool on its own..." he sighed as he removed the gloves.

"Is it my turn now?" Aris raised her brows and looked at Rasmus covered in sweat.

"Once it's cooled off, yes, it's all yours," Rasmus smiled as he nodded.

"Finally," Aris smiled as she observed the plate from up close.