



June 13, 2025

June Update:
Abbey Organ Builders, Opus 1
Saint Michael the Archangel Parish
Leawood, Kansas

As a woodworker, I have a soft spot for crafting the wooden components of a pipe organ. But recently, I've found myself captivated by another aspect of the craft: casting metal sheets for organ pipes. There's something deeply compelling about the process: combining raw materials, heat, and traditional techniques to transform molten metal into solid form. The history and mystery behind these methods only add to the fascination.

Since October 2023, we've been steadily working on the metal pipework for Opus 1. This past week, we reached a major milestone: casting sheets for the façade pipes—the pipes that will be prominently visible at the front of the organ. Because these pipes form the “face” of the instrument, they require extra attention to detail in both appearance and shape.

While it's possible to purchase metal pipes from specialized makers, we've chosen to cast our own sheets. Why? Well, it gives us control over the metal alloy, ensuring the right balance of tin and lead. The physical properties of the sheet—its grain, density, and texture—play a crucial role in the sound and character of each pipe.

We prepare different lead-tin alloys depending on the pipe stop. Once melted in our furnace, the alloy is poured using a wooden trough onto a 5-inch-thick casting table, covered with a specialized cloth that helps manage cooling and surface texture. The metal cools and solidifies quickly, after which we check its thickness—a key factor in determining what kind of pipe it can become.

Before shaping the sheets into pipes, we hammer the metal by hand. This traditional technique helps to strengthen the surface, enhance the tonal character, and add a historical visual texture to the pipe. It's a subtle but powerful step that influences how the pipe feels, sounds, and lasts.

While I only have a few paragraphs to summarize the process, if you are curious to see the casting in action visit our website to view videos of the process: <https://www.sjaorgans.org/video>

Fr. Lew Grobe, O.S.B.
Director, Saint John's Abbey Woodworking and Organ Builders



Lead and Tin Ingots



Molten Alloy Poured From Furnace



Pouring Metal Alloy into Casting Box



Spreading the Molten Alloy



Sheet Cooling



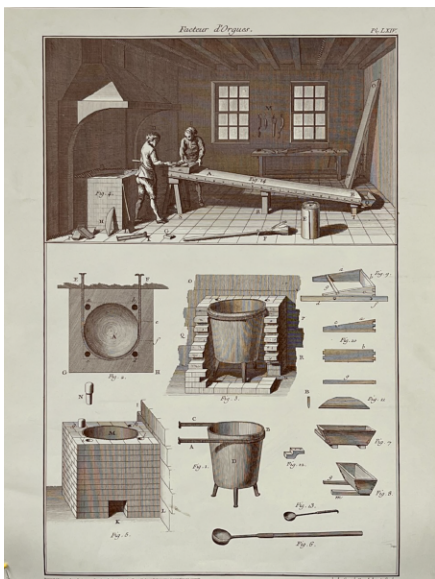
Numbered Sheets Ready for Hammering



Lead Sheets After Hammering



50/50 Lead and Tin Alloy Sheets



Folio of Casting Room from Dom Bedos



Hammered Metal Cut Outs



Rollerboards and Reeds



Martin Cutting Tongues for Reed



Cutting Components for Tracker
Action



Student Worker, Sophie, Assembling Tracker
Components



Markus Making the Feet for the Wooden Pipes



Newest Member of the Team, David Schedler, Jointing
Wood for Bourdon Pipes.