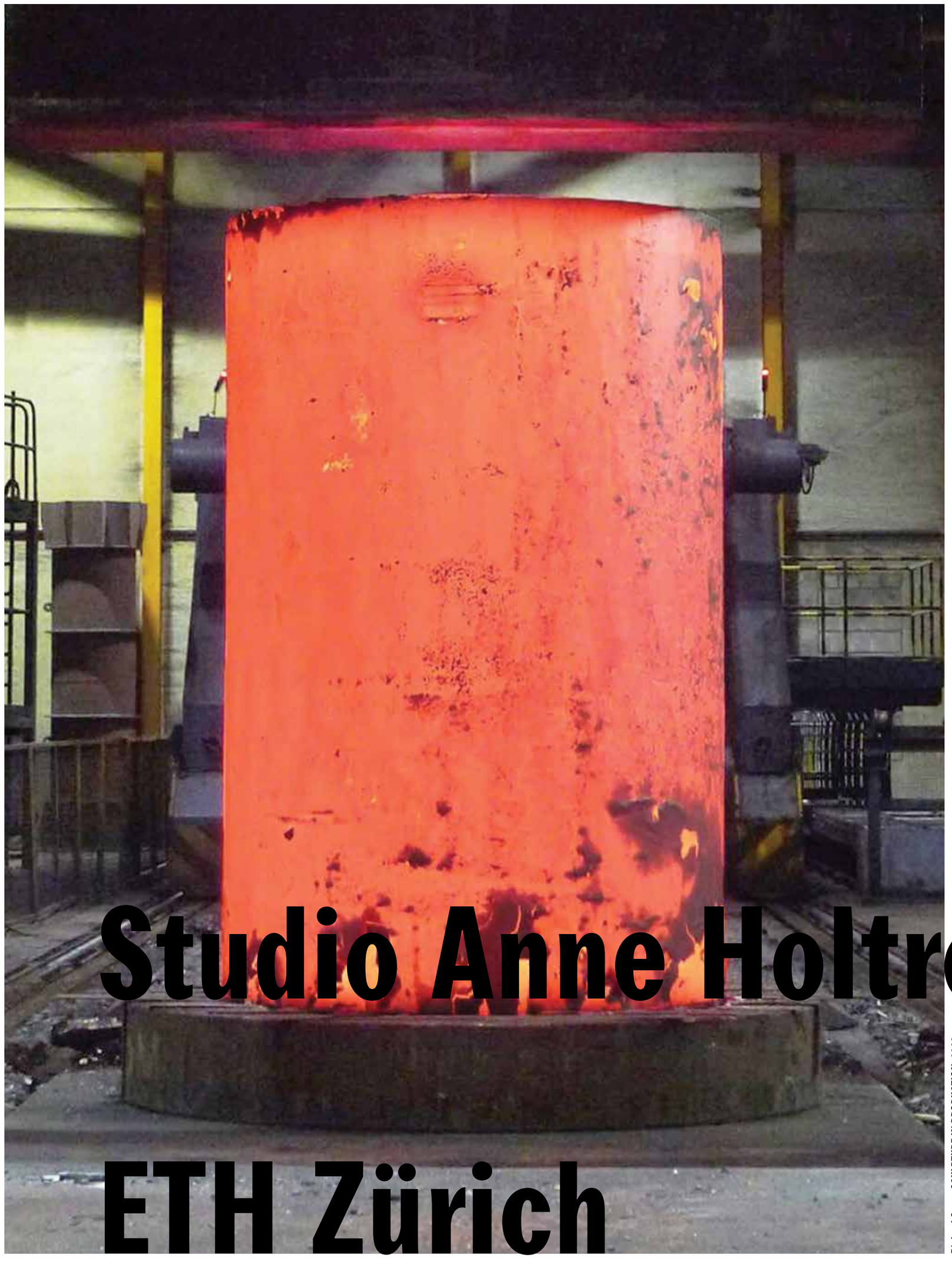

Richard Serra, SCULPTURE IN PRODUCTION, 2022

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MATERIAL GESTURE:

HEAT

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MATERIAL GESTURE:

Heat

“Fire has no precise consistency, but its presence can actively transform matter into different states. ... Out of a river of fire, all manner of shapes later materialize and solidify.” Josep Lluis Mateo Time does not exist, according to British physicist Julian Barbour. He argues that we have no evidence of the past other than our memory of it, and no evidence of the future other than our belief in it. “Difference merely creates an illusion of time, with each individual moment existing in its own right, complete and whole.” What we notice as variations in shape, or changes in the position of objects in our surroundings gives us an illusion of time, but according to Barbour’s theory, they are simply differences between states of matter. For all matter on earth, it is not time that changes its state, it is heat that creates different states of matter. The earth is a geologically active planet and can be seen as a hot body immersed in a cold space, with a continuous loss of temperature. Active volcanoes with lava eruptions or geysers and hot springs are the most perceivable and mesmerising examples of the heat stored deep in the earth and its effect on matter. It made the famous volcanologists Maurice and Katia Kraft go each time closer to bursting volcanoes until it ultimately took their lives by an eruption in Japan. Rock is always being formed by heat, worn down into pieces, and then formed again. This is called the rock cycle. Rock wears down through erosion, then settles and slowly becomes sedimentary rock. If that rock becomes deeply buried, it may melt by the earth’s internal heat into magma. Then the magma may return to the surface as igneous rock. The rock cycle is a materialisation of time over many millions of years, and it is almost abstract. We can witness the use of heat and the altering of matter in most places of production. For the production of our materials, such as the smelting of alumina (derived from bauxite ore) to extract pure aluminium, or for the production of cement out of limestone and clay. Foundries use heat to melt and cast glass, bronze, brass, steel, and aluminium. And heat is used to form and alter the shape of materials, such as blowing glass, or the tempering of it. For who have visited these places of production know it is truly impressive and magical to see matter altered under these extreme heat conditions. With enough heat, rock will melt in front of your eyes. The most important invention in human history is fire. Without fire, humans could not have changed their diet, warmed their places, protected themselves, and produced more advanced tools. The central presence of fire, the hearth, is central to many cultures. Considered as sacred many traditions grew out of these early worship rites. Fire gods were, and still are in certain cultures, worshipped and celebrated. In India, the fire god Agni is present in major rituals such as weddings and cremations. The Irish Celts worshipped Bel to whom they lit great bonfires each May Day, also known as Beltane Eve. Much more recently, Peter Zumthor used fire to create an intrinsic space for reflection with the Bruder Klaus Field Chapel. For him the question was which tools to use to make a sacred space, a space for devotion, that is not based on liturgy. In his words: “water and fire, matter and transcendence.” To achieve this, Zumthor used a smouldering fire to burn the inner wooden formwork, which in turn left all of its traces on the concrete. In this semester we will explore how we can use heat in the production and formation of matter, and possibly how traces left during the formation of matter by heat can remain visible in its end state. You will be asked to make a sacred space. What can a space of devotion be nowadays? How do we find meaning and beauty in such a space? And how is heat, one of our most essential conditions, made present in the formation of that space?

Prof. Anne Holtrop

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