

# MOKUMONO DUNE

*Reshoring bicycle production:  
Design of a frame out of sheet steel  
for e-bike commuters.*

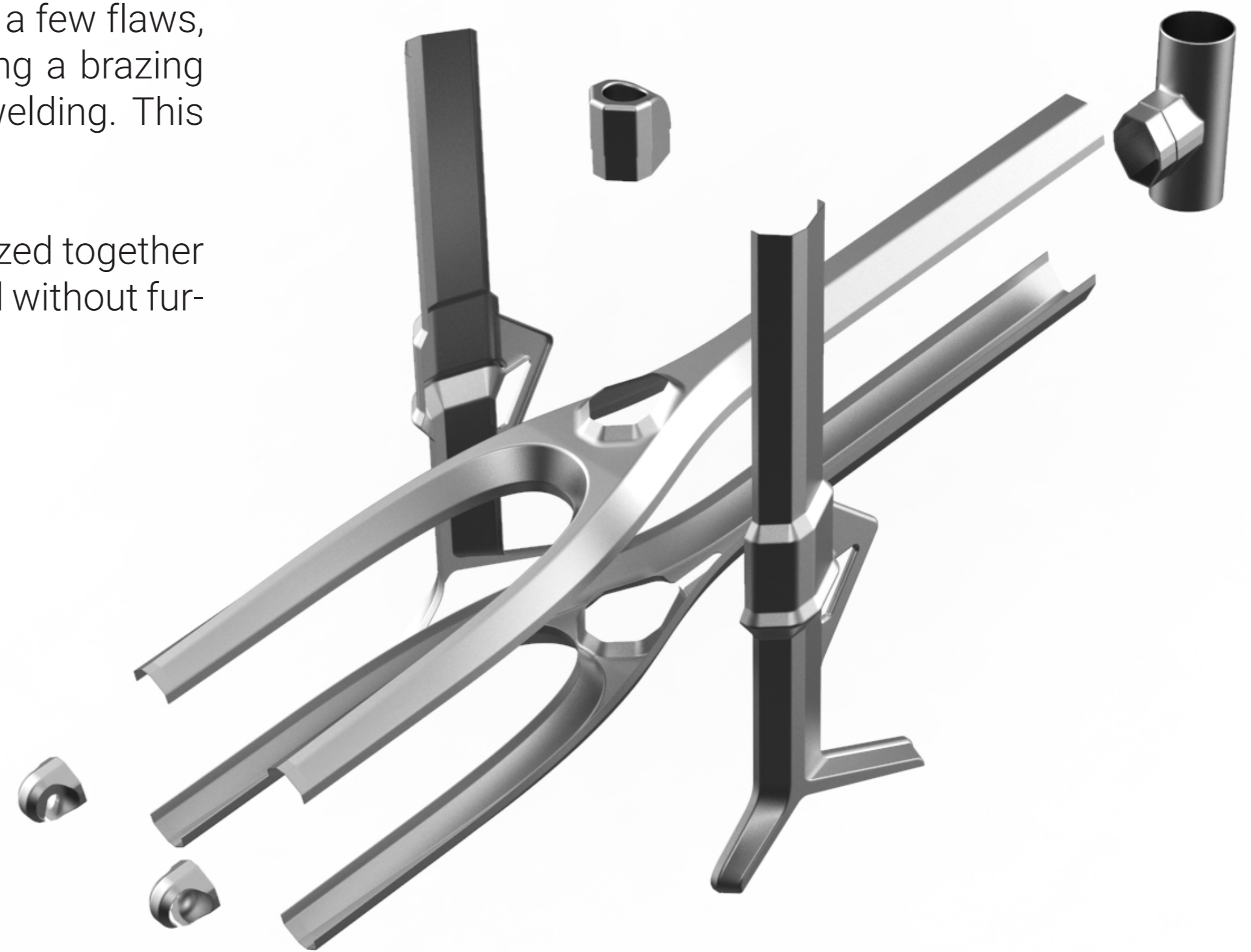
Currently, all bicycle frames are produced in the Far East. A lot of bicycle frame building is done by hand and the wages in the Far East are relatively low. Mokumono found a solution to be able to produce bicycle frames locally. This is achieved by making sheet metal formed bicycle frames. This process can easily be automated, thus making local production viable again.



*"The next generation of sheet steel  
formed e-bikes for the daily commute"*

The e-bike market is rapidly emerging, and it is advisable for Mokumono to join this market. Their production method fits this new market perfectly since there is a lot of space in the sheet metal formed frame. The current production method of Mokumono has a few flaws, mainly caused by the welding process. This issue has been solved by utilizing a brazing process. With brazing, the overall temperatures are a lot lower than with welding. This makes for significantly less warping in the main material.

The Mokumono Dune is designed to consist of four main shells, which are brazed together by well designed joints, so the whole manufacturing process can be automated without further issues.



Committee

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The next generation of sheet steel formed e-bikes for the daily commute

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Integrated Product Design