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(54) Title: CERAMIC TO CERAMIC JOINT AND ASSOCIATED METHODS

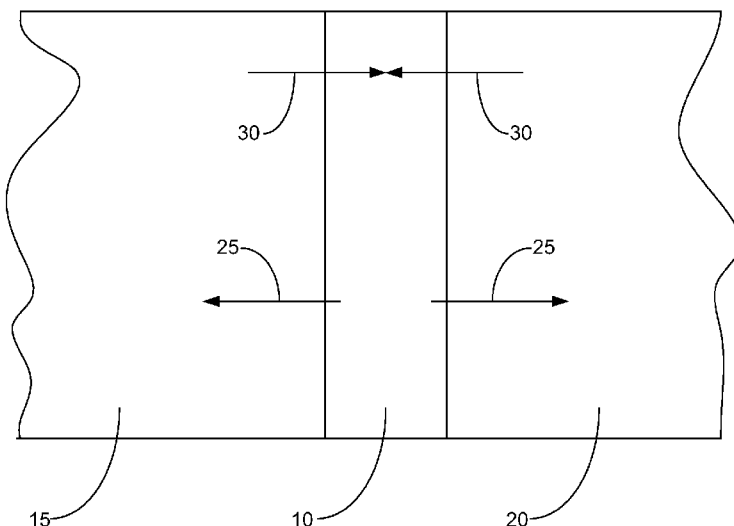


Figure 1

(57) Abstract: The present invention provides a ceramic to ceramic joint and methods for making such a joint. Generally, the joint includes a first (15) ceramic part and a second (20) ceramic part, wherein the first (15) and second (20) ceramic parts each include a ceramic-carbide or a ceramic-nitride material. In some cases, an aluminum-initiated joint region joins the first (15) and second (20) ceramic parts. This joint region typically includes chemical species from the first (15) and second (20) ceramic parts that have diffused into the joint region. Additionally, the first (15) and second (20) ceramic parts each typically include a joint diffusion zone that is disposed adjacent to the joint region and which includes aluminum species from the joint region that have diffused into the joint diffusion zone. Other implementations are also described.