

MULTI-CHAMBER CONFORMABLE BLADDER FOR COMPOSITE PART TOOLING

ABSTRACT

A tool for forming a part includes a first tool portion including a first tool surface. The
5 tool further includes a second tool portion comprising a second tool surface facing the first tool
surface, wherein the first tool surface and the second tool surface define a tool chamber for
forming the part. The tool further includes a bladder subassembly disposed in the tool
chamber between the first tool surface and the second tool surface. The bladder subassembly
includes a plurality of inner bladders disposed within tool chamber, wherein each inner bladder
10 of the plurality of inner bladders includes an inner bladder chamber that is independently
inflatable to selectively apply pressure to the part. The bladder subassembly further includes a
bladder cover disposed over the plurality of inner bladders within the tool chamber to provide a
barrier between the plurality of inner bladders and the part.

15 FIG. 1A