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KENNAMETAL INC. Intellectual Property Department P.O. BOX 231 1600 TECHNOLOGY WAY LATROBE, PA 15650			HILL, STEPHANI A	
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k-corp.patents@kennametal.com  
larry.meenan@kennametal.com

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* STEVEN A. JAMESON, MICHAEL R. CRIPPS,  
CHRISTOPHER J. SMITH, TERRY HAMMOND,  
ROBERT K. CARLSON, and JOHN DUMMERMUTH

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Appeal 2019-002312  
Application 13/626,185  
Technology Center 1700

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Before KAREN M. HASTINGS, CHRISTOPHER C. KENNEDY, and  
JEFFREY R. SNAY, *Administrative Patent Judges*.

HASTINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant<sup>1</sup> requests our review under 35 U.S.C. § 134(a) of the  
Examiner's decision rejecting claims 1, 2, 4, 5, 7–13, 28, and 30.

We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We use the word “Appellant” to refer to the “applicant” as defined in 37  
C.F.R. § 1.42(a). Appellant identifies Kennametal Inc. as the real party in  
interest (Appeal Br. 3).

CLAIMED SUBJECT MATTER

Claim 1 is illustrative of the subject matter on appeal (Appeal Br. 22, 23, Claims App'x):

1. A process for the production of cutting tool inserts, the process comprising:
  - positioning a bottom punch into a powder compaction mold, the bottom punch comprising:
    - a bottom punch body,
    - a bottom punch face located on a pressing end of the bottom punch body,
    - an internal channel disposed in the bottom punch body and opening at the bottom punch face, and
    - a core rod partially disposed in the internal channel, the core rod comprising a pressing end and a countersinking projection located on the pressing end, wherein the core rod partially extends through the opening of the internal channel and above the bottom punch face,
    - the core rod countersinking projection comprising a first arcuate projection surface;
  - introducing a metallurgical powder into a mold cavity formed by the powder compaction mold and the bottom punch;
  - positioning a top punch into the powder compaction mold in an orientation opposed to the bottom punch, the top punch comprising:
    - a top punch body,
    - a top punch face located on a pressing end of the top punch body,
    - an internal channel disposed in the top punch body and opening at the top punch face, and

a core pin disposed in the internal channel, the core pin comprising a pressing end and a countersinking projection located on the pressing end, wherein the countersinking projection extends through the opening of the internal channel and below the top punch face,

the core pin countersinking projection comprising a second arcuate projection surface; and

compressing the metallurgical powder between the bottom punch and the top punch to form a powder compact;

wherein, upon pressing engagement of the core pin and core rod with respect to one another during said compressing, the first and second arcuate projection surfaces adjoin one another and together form a contiguous through-hole contouring surface and

*wherein the contiguous through-hole contouring surface presents a continuous arcuate profile when viewed in cross-section, around a circumference of the core pin and the core rod.*

The following rejections under 35 U.S.C. § 103 have been maintained by the Examiner:<sup>2</sup>

- 1) Claims 1, 2, 4, 7, and 28–30 as unpatentable over Smilovici '828 (US 2006/0165828 A1; published July 27, 2006) and Smilovici '384 (US 2007/0003384 A1; published Jan. 4, 2007);
- 2) claims 5, 8, 9, 10, and 11 as unpatentable over Smilovici '828, Smilovici '384, and Masahiro (JP 2008-246567 A; published Oct. 16, 2008; as translated);

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<sup>2</sup> The rejection of claim 7 made under 35 U.S.C. § 112 was withdrawn by the Examiner (Ans. 3).

- 3) claims 12 and 13 as unpatentable over Smilovici 828, Smilovici 384, Gubanich (US 2004/0086415 A1; published May 6, 2004), and Pressing and Sintering (*Pressing and Sintering*, The Library of Manufacturing, [http://thelibraryofmanufacturing.com/pressing-\\_sintering.html](http://thelibraryofmanufacturing.com/pressing-_sintering.html), retrieved Mar. 15, 2016);
- 4) claims 1, 2, 4, 5, 7–13, and 28–30 as unpatentable over Smilovici '384 and Masahiro.

Appellant's arguments focus on the disputed limitation highlighted above of claim 1 (Appeal Br. 10–20; Reply Br. 3–8), with a conclusory emphasis on dependent claim 7 (Appeal Br. 16, 19). We note that merely reciting what claim 7 states is not considered a separate argument. *See In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (“[T]he Board reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art.”). Accordingly, all the claims stand or fall with claim 1, including those claims separately rejected.

#### OPINION

Upon consideration of the evidence of record and each of Appellant's contentions as set forth in the Appeal Brief, as well as the Reply Brief, we determine that Appellant has not demonstrated reversible error in the Examiner's rejections (*e.g.*, *generally* Ans.). *In re Jung*, 637 F.3d 1356, 1365–66 (Fed. Cir. 2011) (explaining the Board's long-held practice of requiring Appellant(s) to identify the alleged error in the Examiner's

rejection). We sustain the rejections for the reasons expressed by the Examiner in the Final Office Action and the Answer.

We add the following primarily for emphasis.

It has been established that the obviousness analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Likewise, it is well settled that a reference stands for all of the specific teachings thereof as well as the inferences one of ordinary skill in the art would have reasonably been expected to draw therefrom. *See In re Fritch*, 972 F.2d 1260, 1264–65 (Fed. Cir. 1992).

Appellant's principal argument regarding claim 1 in each 103 rejection (Smilovici '828 with Smilovici '384 or Masahirio with Smilovici '384) is that the Examiner's reliance on Figure 8 of Smilovici '384 as depicting a continuous arcuate profile as recited in claim 1 is misplaced because, a) Figure 8 of Smilovici '384 at best shows only a part of the throughhole 38 as it is a cross-section of the insert along line VIII-VIII of Figure 3 of Smilovici '384 (Appeal Br. 11, 12), b) Figure 8 is an inaccurate representation of the insert disclosed therein (Appeal Br. 12), and c) a literal interpretation of Figures 7 and 8 of Smilovici '384 would reveal a stepped inner profile (Appeal Br. 12, 13). These arguments are reiterated in the Reply Brief, and Appellant also disputes the Examiner's interpretation of "arcuate" as encompassing being in the shape of a bow (Reply Br. 5; Ans. 6, 7).

Appellant's arguments are not persuasive of reversible error as they fail to appreciate the applied prior art as a whole and the inferences that one

of ordinary skill in the art would have made therefrom. Even adopting Appellant's claim interpretation that would exclude bands, steps and other discontinuities<sup>3</sup>, one of ordinary skill would have readily inferred that a throughbore may have a continuous arcuate profile when viewed in cross-section as claimed. While we appreciate Appellant's detailed review of the possible structure of Smilovici '384's throughbore, we agree with the Examiner that one of ordinary skill in the art looking at Figure 8 would have inferred that a smooth arcuate profile for a throughbore of a cutting insert was one of a limited number of possible shapes (compare Figure 8 of Smilovici '384 to Figure 20B of Appellant's Specification). It has been generally held that ordinarily changes in shapes of known elements are within the level of skill in that art, especially in the absence of unexpected results or criticality. *Cf. In re Dailey*, 357 F.2d 669, 676 (CCPA 1966) (change in shape ordinarily prima facie obvious). Indeed, here we have a generally arcuate shape of a throughbore exemplified in the references (e.g., Smilovici '828 Fig. 9; Smilovici '384 Fig. 7, 8), the shape merely needs, at best, to be modified to be a "contiguous" and "continuous" arcuate shape. Appellant's explanation that such a contiguous shape may be advantageous as reducing potential from interference from attachment screws (Appeal Br. 14, 15, discussing Spec. ¶¶ 74, 75) is inadequate to establish non-

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<sup>3</sup> Paragraph 61 of Appellant's Specification provides an explicit definition of "contiguous through-hole surface" which excludes "bands, steps, planar intersections, and other geometrical surface discontinuities."

obviousness of such a shape in light of the ordinary creativity of one of ordinary skill in the art and the applied prior art.<sup>4</sup>

As we “take account of the inferences and creative steps that a person of ordinary skill in the art would employ,” we find a person of ordinary skill in the art would have, within their level of skill, modified the core pin and core rod of the applied prior art such that a throughbore would have any desired shape including a continuous arcuate profile as recited, based on the combined teachings of the applied prior art for the reasons articulated above and by the Examiner (*see generally* Ans.). *KSR Int’l*, 550 U.S. at 418; *see also id.* at 421 (“A person of ordinary skill is also a person of ordinary creativity, not an automaton”); *Ball Aerosol & Specialty Container, Inc. v. Limited Brands, Inc.*, 555 F.3d 984, 993 (Fed. Cir. 2009) (under the flexible inquiry set forth by the Supreme Court, the PTO must take account of “the inferences and creative steps,” as well as routine steps, that an ordinary artisan would employ)). *See also In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (“The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference. . . . Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art”); *In re Nievelt*, 482 F.2d 965, 968 (CCPA 1973) (“Combining the *teachings* of references does not involve an ability to combine their specific structures”).

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<sup>4</sup> It is noted that Appellant’s Specification also encompasses many other alternative shapes inclusive of bands and steps and other discontinuities (e.g., Figs. 5A, 5B, 9A, 9B, 21A, 21B).

Accordingly, we affirm the Examiner's prior art rejections of the claims under 35 U.S.C. § 103(a) for the reasons given above and presented by the Examiner.

### CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1, 2, 4, 7, 28–30	103	Smilovici '828, Smilovici 384	1, 2, 4, 7, 28–30	
5, 8-11	103	Smilovici '828, Smilovici '384, Masahiro	5, 8–11	
12, 13	103	Smilovici '828, Smilovici '384, Gubanich, Pressing and Sintering	12, 13	
1, 2, 4, 5, 7–13, 28-30	103	Smilovici '384, Masahiro	1, 2, 4, 5, 7–13, 28–30	
<b>Overall Outcome</b>			1, 2, 4, 5, 7–13, 28–30	

### TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

**AFFIRMED**