# UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD \_\_\_\_\_\_

R.J. REYNOLDS VAPOR COMPANY,

Petitioner

v.

FONTEM HOLDINGS 1 B.V.,

Patent Owner

Case IPR2016-01268 Patent 8,365,742

PETITIONER'S RESPONSES TO PATENT OWNER'S MOTION FOR OBSERVATIONS ON CROSS-EXAMINATION OF DR. ROBERT H. STURGES RE-FILED PURSUANT TO BOARD'S ORDER OF SEPTEMBER 14, 2017 (PAPER 45)



Pursuant to the Board's Scheduling Order (Paper 11) and Board's Order of September 14, 2017 (Paper 45), R.J. Reynolds Vapor Company ("Petitioner") hereby re-files Petitioner's Responses to Patent Owner Fontem Holdings 1 B.V.'s ("P.O.") Motion for Observations on Cross-Examination of Dr. Robert H. Sturges. Pursuant to Paper 45, Petitioner's re-filed Responses delete reference to Sturges' 1692 Transcript (Ex. 2029).

### I. Airflow in Hon 043

**Response to Observation No. 1**: P.O.'s observation relies upon out of context and incomplete testimony, and is not supported by the cited testimony. In Ex. 2030, 18:24-20:14, which includes additional context omitted by P.O., Dr. Sturges is referring to Hon 043's large diameter droplets, which Hon 043 distinguishes from small diameter droplets. See Ex. 1003 at 11 ("After the atomization, the large diameter droplets stick to the wall under the action of eddy flow and are reabsorbed by the porous body 27 via the overflow hole 29, whereas the small diameter droplets float in stream and form[] aerosols, which are sucked out via the aerosol passage 12, gas vent 17 and mouthpiece 15."). In Ex. 2030, 20:2-10, Dr. Sturges testified that "the droplet" (that is, Hon 043's large diameter droplets, referred to as "the droplet" or "those droplets" in this line of questioning) is reabsorbed by Hon 043's porous body. In Ex. 2030, 20:11-14, Dr. Sturges testified that Hon 043 does not suggest that "the droplet[s]" (that is, Hon 043's



large diameter droplets) passing through Hon 043's overflow hole 29 would enter the porous body without being reabsorbed. With respect to Hon 043's small diameter droplets, Dr. Sturges testified in Ex. 2016, 100:9-16 that those droplets "pass from the cavity in the atomizer to the downstream end of the atomizer through the porous body." This testimony is relevant to Petition (Paper 2) at 15-16, 25-29, 34-35, Opposition (Paper 24) at 31-40 and 43-45, Reply (Paper 30) at 15-20, Ex. 1015 (Sturges Petition Declaration) at ¶¶ 47-49 and pp. 32-35, 38-39, Ex. 1020 (Sturges Supplemental Declaration) at ¶¶ 9-13, Ex. 1027 (Sturges Reply Declaration) at ¶¶ 33-45, 54 and 67, and Ex. 2015 (Meyst Declaration) at ¶¶ 42-46, 76-79, and 91-94. The testimony is relevant because it demonstrates that (1) a PHOSITA would have understood that Hon 043 does not require an exit hole at the downstream end of the atomizer in order for the small diameter droplets to exit or for the Hon 043 device to otherwise properly function, and (2) does not support P.O.'s contention that Hon 043 purportedly "teaches away" from placing a wick in the airflow path as taught by Whittemore.

Response to Observation No. 2: P.O.'s observation relies upon out of context and incomplete testimony, and is not supported by the cited testimony. In Ex. 2030, 47:1-14, Dr. Sturges testified that he does not know the purpose for the "arch space under the bold [sic, bulge] section" illustrated in Fig. 6 of Hon 043. However, regardless of its purpose, Dr. Sturges testified elsewhere that the arch



space under the bulge does not depict an exit hole. *See* Ex. 1027, ¶¶ 34-45; Ex. 1034, ¶6. This testimony is relevant to Petition (Paper 2) at 15-16, 25-29, and 34-35, Opposition (Paper 24) at 31-40 and 43-45, Reply (Paper 30) at 15-20, Ex. 1015 (Sturges Petition Declaration) at ¶¶ 47-49 and pp. 32-35, 38-39, Ex. 1020 (Sturges Supplemental Declaration) at ¶¶ 9-13, Ex. 1027 (Sturges Reply Declaration) at ¶¶ 33-45, 54 and 67, and Ex. 2015 (Meyst Declaration) at ¶¶ 42-46, 76-79, and 91-94. The testimony is relevant because it demonstrates that Dr. Sturges' deposition and declaration testimony concerning Hon 043's failure to disclose an open exit hole is credible and reliable, and regardless of the purpose for the "arch space under the [bulge] section," it is not an exit hole.

Response to Observation No. 3: P.O.'s observation relies upon out of context and incomplete testimony, and is not supported by the cited testimony. In Ex. 2030, 78:15-79:4, Dr. Sturges testified that Figs. 1-3 in Hon 043 do not show the bulge 36 deforming when it is inserted into the liquid supply. In Ex. 2030, 79:5-8, Dr. Sturges testified that bulge 36 could deform if it was made of a "softer" or "less rigid material [] than liquid supply." In Ex. 2030, 22:12-24:1, Dr. Sturges also testified that Hon 043 shows the liquid supply "deforming" when contacted by Hon 043's bulge. In Ex. 2030, 38:7-39:1, Dr. Sturges testified that, because of the cavity wall, "one would not expect a significant deformation [of Hon 043's porous body] under gravity." This testimony is relevant to Petition (Paper 2) at 15-16,



Opposition (Paper 24) at 20-42, Reply (Paper 30) at 11-20, Ex. 1015 (Sturges Petition Declaration) at ¶¶ 44-49 and pages 31-35, Ex. 1020 (Sturges Supplemental Declaration) at ¶¶ 4-13, Ex. 1027 (Sturges Reply Declaration) at ¶¶ 23-45, and Ex. 2015 (Meyst Declaration) at ¶¶ 42-46, 66-88, and 98-100. The testimony is relevant because it demonstrates that Hon 043's drawings are consistent with Dr. Sturges' opinions concerning how the PHOSITA would have understood the teachings of Hon 043, including the extent to which Hon 043's porous body would deform but for the support provided by the cavity wall, and the lack of an exit hole.

Response to Observation No. 4: P.O.'s observation further confirms the motivation for modifying Hon 043 as taught by Whittemore. In Ex. 2030, 75:9-76:20, Dr. Sturges testified that the second piezoelectric supplies energy to "some" of the liquid droplets that are ejected from Hon 043's ejection holes by either direct or indirect energy transmission, and that "one skilled in the art at the time of the '742 patent was filed [would have understood] that direct transfer of energy from the piezoelectric element to the liquid droplets was more efficient than indirect" transfer of energy. This testimony is relevant to Petition (Paper 2) at 18-19, Opposition (Paper 24) at 13-14 and 48-49, Ex. 1027 (Sturges Reply Declaration) at ¶¶ 62-64, and Ex. 2015 (Meyst Declaration) at ¶¶ 98-100. The testimony is relevant because it supports Dr. Sturges' opinion that a PHOSITA would have



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