

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

FICEP CORPORATION,

Plaintiff

v.

PEDDINGHAUS CORPORATION,

Defendant.

Civil Action No.: 1:19-cv-1994-RGA

JURY TRIAL DEMANDED

FIRST AMENDED COMPLAINT AND JURY DEMAND

1. Plaintiff Ficep Corporation is a Maryland corporation having offices at 2301 Industry Court, Forest Hill Industrial Park, Forest Hill, Maryland 21050.

2. On information and belief, Defendant Peddinghaus Corporation is an entity organized under the laws of Delaware and has a principal place of business at 300 N. Washington Ave, Bradley, Illinois 60915.

3. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§1331 and 1338(a).

4. As alleged herein, Defendant – individually and/or jointly with others – have infringed (literally and/or by equivalents), and continue to infringe, Ficep’s patent rights by making, using, importing, selling, and/or offering to sell products covered by one or more patent claims – or by performing any method claimed therein – within the United States, and/or by contributing to or inducing such infringement.

5. Ficep is the owner of all rights, title and interest – including the right to bring a suit for patent infringement – in U.S. Patent No. 7,974,719, entitled “Method and Apparatus for

Automatic Manufacture of an Object with Multiple Intersecting Components” (“the ’719 patent”) (copy attached as Exhibit A, hereto).

6. Ficep is an industry leader and principal supplier of structural steel and plate fabrication and processing systems. The ’719 patent generally relates to systems and methods for the manufacture of construction components, such as steel beams, including for example by cutting or shaping the component or marking particular locations thereon based upon construction information that may be stored in a computer.

Count I
Infringement of U.S. Patent No. 7,974,719

7. Ficep repeats and realleges the foregoing paragraphs.

8. Defendant Peddinghaus has directly and/or indirectly infringed one or more claims of the ’719 Patent, in violation of one or more subsections of 35 U.S.C. §271 – including at least one or more of subsections §271(a), (b), (c), (f) and (g) – by making, using, importing, selling, and/or offering to sell products covered by one or more of the ’719 patent within the United States, and/or by contributing to or inducing such infringement.

9. By correspondence from its counsel dated September 20, 2011, and October 21, 2019, Ficep informed Peddinghaus of the ’719 patent and Peddinghaus’s infringement of the ’719 patent on account of at least one or more of the following Peddinghaus CNC (“computer numerical control”) machine products, and predecessors thereto: Peddiwriter, HSFDB-C Plate Processor; HSFDB-B Plate Processor; FPD-1120 Plate Processor; FPB-1800 Plate Processor; Peddi XDM-630 Drill Line; PCD-1100/3C – Advantage-2 Drill Line; PCD-1100/3B - Advantage Drill Line; BDL-1250/9D Drill Line; BDL-1250/9B Drill Line; Anglemaster-HD Angle Line; Anglemaster-663 Angle Line; AFPS-643/Q Angle Line; Peddibot-1200 Thermal Cutting/Coping; Ring of Fire Thermal Cutting/Coping; Ocean Avenger Plus CNC Beam Drill

Line (“Peddinghaus CNC machines”), along with third party 3D modeling software such as Tekla, SDS/2 and others, and Peddinghaus’s Raptor software (and predecessor software) that is used with the Peddinghaus CNC machines.

10. Peddinghaus’s direct infringements – and/or the direct infringements of others, for which Peddinghaus would be liable as an indirect infringer – satisfy all the limitations of one or more claims of the ’719 patent, either literally or by equivalents.

11. Defendant Peddinghaus is liable as a direct infringer because it has made, used, sold, offered to sell, or imported into the U.S., products or services that are within the scope of one or more claims of the ’719 patent and/or Defendant Peddinghaus has made, used, sold, offered to sell, or imported into the U.S. products, made by methods claimed in the ’719 patent.

12. Defendant Peddinghaus is liable as an indirect infringer for the direct infringement of others that have made, used, sold or offered to sell, or imported into the U.S., products or services that are within the scope of one or more claims of the ’719 patent and/or that have made, used, sold, offered to sell, or imported into the U.S., products made by methods claimed in the ’719 patent.

13. On information and belief, defendant Peddinghaus has actively induced infringement of the ’719 patent, at least by intentionally encouraging the direct infringement of one or more claims of the ’719 patent by customers and their detailers, buyers, sellers and others. On information and belief, prior to this action, Peddinghaus had knowledge of and intended to cause direct infringement by others and/or Peddinghaus willfully blinded itself to the existence of the ’719 patent and such infringement. Peddinghaus provides instructions, user manuals, advertising, and/or marketing materials which facilitate, direct, or encourage such infringing use with knowledge thereof.

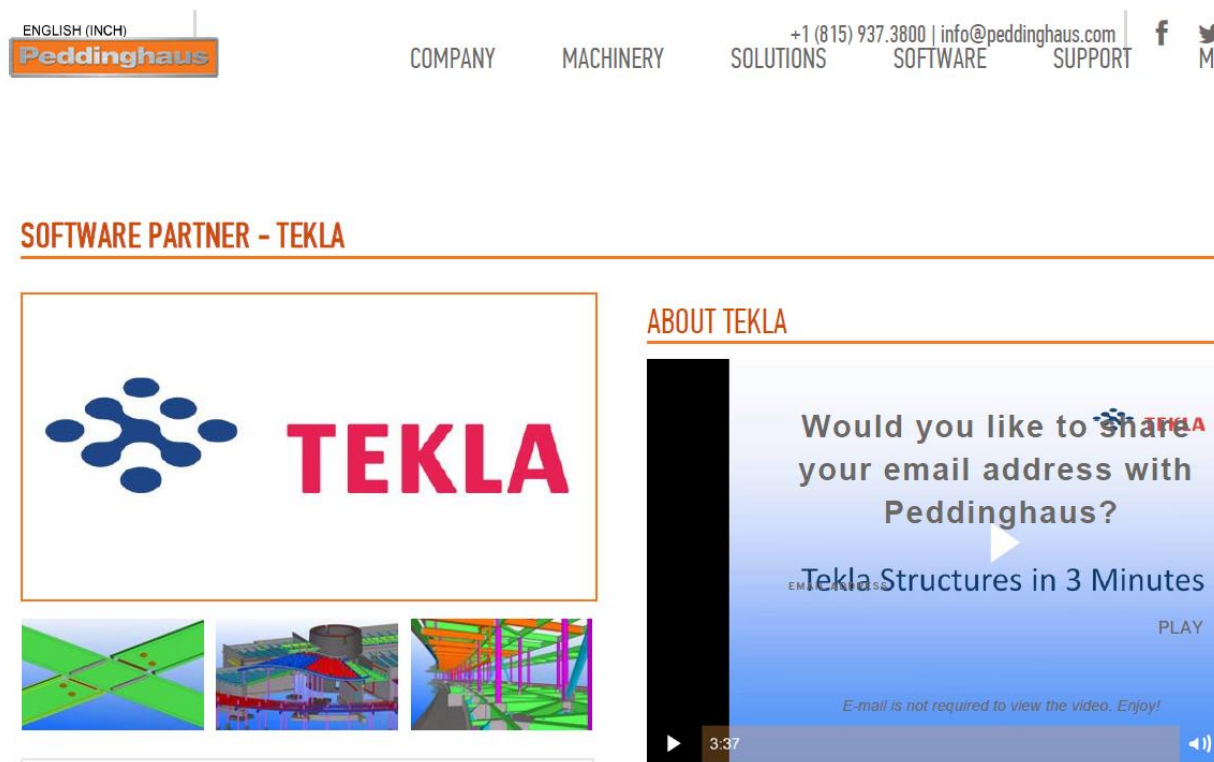
14. On information and belief, defendant Peddinghaus is also a contributory infringer of one or more claims of the '719 patent, at least because it sells, offers to sell, or imports into the U.S. a material or apparatus for use in practicing subject matter claimed in the '719 patent, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in such infringement, and not a staple article or commodity of commerce suitable for substantial non-infringing use. The Peddinghaus CNC machines mentioned above, including the Peddinghaus Raptor software used with them, are used to perform most of the claim limitations of each claim, as set forth in the paragraphs below, including limitations such as receiving the design model, storing the design model, extracting component dimensions and intersection and manufacturing parameters, the transmitting limitation and the manufacturing limitation. The Peddinghaus CNC machines, including the Peddinghaus Raptor software used with them, have no substantial non-infringing use because they are used with 3D modeling software, with the data from the 3D modeling software being imported into Raptor. On information and belief, prior to this action Peddinghaus had knowledge of the '719 patent and intended to cause direct infringement by others, and/or Peddinghaus willfully blinded itself to the existence of the '719 patent and such infringement.

15. For example, Peddinghaus's customers that use any of the Peddinghaus CNC machines mentioned above infringe at least independent claims 1, 7 and 14 of the '719 patent, as set forth in the following paragraphs.

16. Using a combination of 3D modeling software and the above Peddinghaus CNC machines, Peddinghaus's customers engage in a method for automatic manufacture of a steel object. This combination of the 3D modeling software and the above Peddinghaus CNC machines is also an apparatus for automatic manufacture of a steel object. This combination of

the 3D modeling software and the above Peddinghaus CNC machines also is an article of manufacture that comprises a program storage medium which has computer-readable program code incorporated therein for the automatic manufacture of a steel object.

17. Peddinghaus's customers, including any third party detailers used by the customers, create at a computing device, a design model of an object having multiple individual components, at least two of the individual components defining an intersection at which the two components are in contact with one another. As shown in the Peddinghaus website, Peddinghaus's CNC machines are designed to be used with a number of the third party 3D modeling software providers, including Tekla, SDS/2, Gritec and others:



(See https://www.peddinghaus.com/tekla/bim-software/building-information-modeling/software-1/9002_tekla.)



COMPANY

MACHINERY

SOLUTIONS

SOFTWARE

SUPPORT

M

SOFTWARE PARTNER - SDS/2



ABOUT SDS-2



(See https://www.peddinghaus.com/sds-2/steel-modeling-software/steel-fabrication-software/software-1/9004_sds2.)



COMPANY

MACHINERY

SOLUTIONS

SOFTWARE

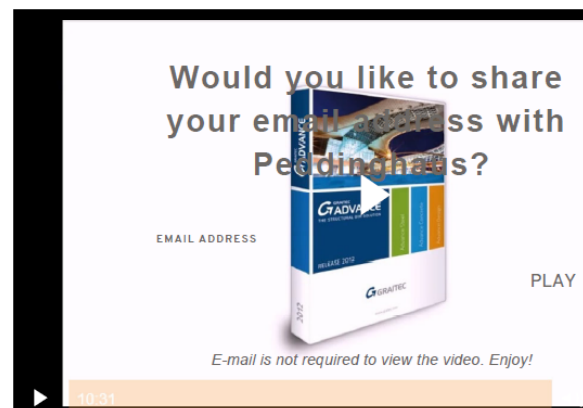
SUPPORT

M

SOFTWARE PARTNER - GRAITEC



ABOUT GRAITEC



(See https://www.peddinghaus.com/graitec-structural-analysis-and-design-software/3d-modeling-software/civil-engineering-software/software-1/9008_graitec.)

18. The 3D modeling software, such as Tekla, SDS/2 and others, is used by Peddinghaus's customers to create the design models. According to Tekla's website, for example, "Tekla Structures is the most constructible structural software for BIM. With it, you can create, combine, manage and share accurate multi-material 3D models full of construction information. You can use Tekla Structures for design, detailing and information management from conceptual planning to fabrication and construction on site." (<https://www.tekla.com/us/products/tekla-structures>.) Tekla's website further provides: "Tekla Structures is powerful and flexible software for structural steel detailers and fabricators. You can create a detailed 3D model of any type of steel structure from industrial and commercial projects to stadiums and high rise buildings." (<https://www.tekla.com/us/solutions/steel>.)

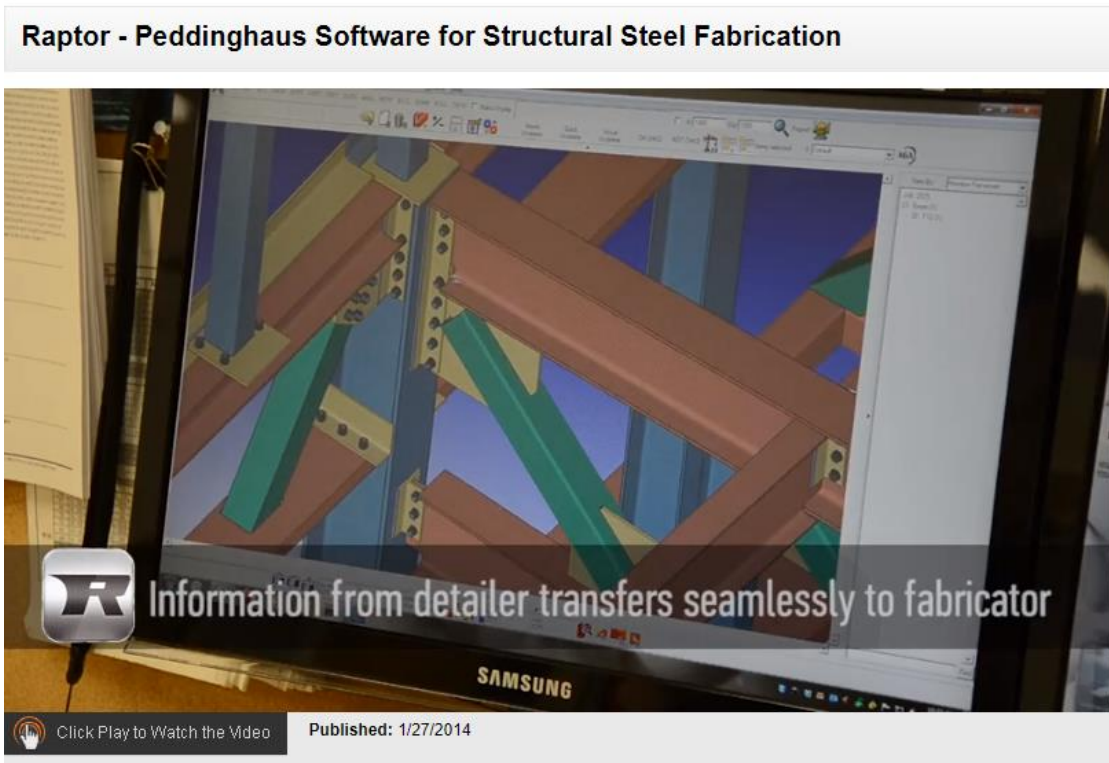
19. Another example of such 3D modeling software used by Peddinghaus's customers is SDS/2. According to SDS/2's brochure on its website, for example, "As the detailer inputs members, like columns and beams, connections are automatically designed with their necessary materials, bolts, holes and welds. SDS/2 Detailing takes a uniquely intelligent approach in its connection design by considering framing conditions and erectibility, automatically performing clash prevention as a part of its connection design. In addition, SDS/2 Detailing can value engineer the connections on a project, helping users to design the most economical connections to fabricate and erect. No other 3D detailing product can do this automatically." (<https://sds2.com/content/docs/brochures/rebrand/SDS2Detailing.pdf>.)

20. Peddinghaus's customers use Peddinghaus's Raptor software (including any version) to receive at a programmable logic controller, the design model of the object. Peddinghaus's Raptor software is used to "[i]mport and enhance DSTV files from BIM models into Raptor. Enhancements strengthen the data contained within the DSTV files for more

accurate programming.” (https://www.peddinghaus.com/building-information-modeling/bim/peddimat-software/raptorinfo-1/130_raptor_overview.) Moreover, with the Raptor software, “[u]sers of Tekla building design software benefit from a direct connection with Raptor. All part information from the detailer transfers seamlessly to the fabricator for increased accuracy of hole locations, scribe locations, cope data, weld information and more.” (https://www.peddinghaus.com/building-information-modeling/bim/peddimat-software/raptorinfo-1/130_raptor_overview.) This is also described in the brochures for Peddinghaus’s CNC machines, which all describe Raptor’s DSTV import module or a Tekla API import model is used with the CNC machine. *See, e.g.*, Peddiwriter brochure (https://akamai.peddi.com/pdf/automated-layout-marking/peddiwriter-automated-layout-marking-machine_INCH.pdf) at 9 (describing that Raptor’s DSTV Import Module allows for importing DSTV files from Design Data, Tekla Structures, SteelOffice, Graitec and more, and also describing Raptor’s Tekla API Import Module, which allows for the direct import of Tekla part files into Raptor); HSFDB-C Plate Processor at 11 (“Automatic Import and Tooling of Multiple Common File Types Including DSTV, DXF, etc.”); HSFDB-B Plate Processor at 9 (same); FPB-1800 Plate Processor brochure at 11 (same); Peddi XDM-630 Drill Line brochure at 12 (“DSTV Import Module” and “Tekla API Import Module”); PCD-1100/3C – Advantage-2 Drill Line brochure at 10-11 (“DSTV Import Module,” “Tekla API Import Module,” “iDSTV+ and DSTV+ Import/Export Module,” “Peddimat Import and Export Module”); PCD-1100/3B - Advantage Drill Line brochure at 9 (“DSTV Import Module” and “Tekla API Import Module”); BDL-1250/9D Drill Line brochure at 10-11 (“DSTV Import Module,” “Tekla API Import Module,” “iDSTV+ and DSTV+ Import/Export Module,” “Peddimat Import and Export Module”); Anglemaster-HD Angle Line brochure at 7 (“The DSTV Import Module” and “The

Tekla API Import Module”); Anglemaster-663 Angle Line brochure at 8-9 (“DSTV Import Module,” “Tekla API Import Module,” “iDSTV+ and DSTV+ Import/Export Module,” “Peddimat Import and Export Module”); AFPS-643/Q Angle Line brochure at 7 (“The Raptor Takla Import”); Peddibot-1200 Thermal Cutting/Coping brochure at 13 (“import and export of DSTV+ and iDSTV+ files”); Ring of Fire Thermal Cutting/Coping brochure at 6 (“Easily import common DSTV files and process on the Ring of Fire from Peddinghaus”; “The Raptor Tekla Import – Automatic Scribe Data”); Ocean Avenger Plus CNC Drill Line (“Import Directly from Steel Detailing Software” including with “3-D Modeling Camp” and “AutoCAD Camp”) (<https://www.oceanmachinery.com/solutions/avenger-plus-cnc-beam-drill-line.html>).

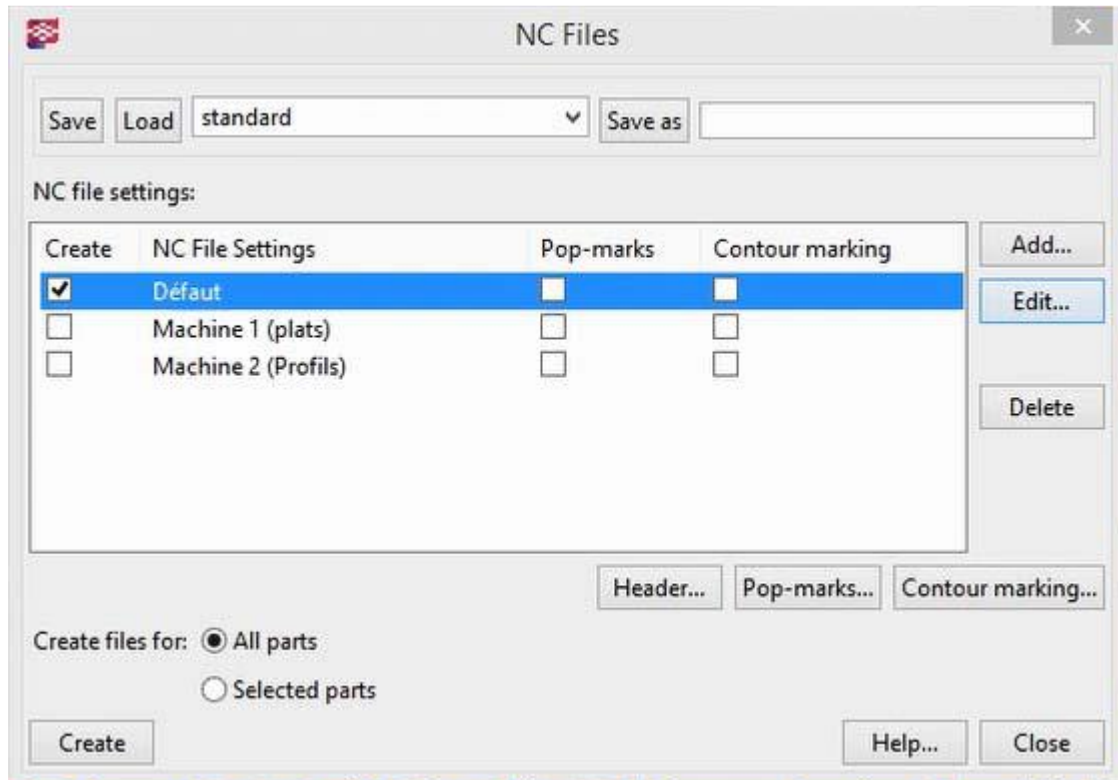
21. This is also shown, for example, in the video of the Raptor software available on the Peddinghaus website. For example, at https://www.peddinghaus.com/videos.asp?pID=500_PeddiTV&mid=1&mediaid=qhtw1wc1o0&raptor=yes, at 1:54-3:06, it shows at 2:06 the ability to import “DSTV (NC) files”, as well as “Import From Tekla,” import “XML 3D,” import “Peddimat,” import “SDS2,” import “DXF,” and import “iDSTV+.”



22. Because the design model is imported, as described above, it is also necessarily stored at a database unit at the programmable logic controller. Indeed, the parts of the design model can be viewed and modified using Raptor. *See, e.g.,* Peddiwriter brochure (https://akamai.peddi.com/pdf/automated-layout-marking/peddiwriter-automated-layout-marking-machine_INCH.pdf) at 9 (describing “3D Module” of Raptor, which allows user to “modify, inspect, create”). Also, the design model is necessarily stored because the DSTV files can then also be exported. *See* https://www.peddinghaus.com/building-information-modeling/bim/peddimat-software/raptorinfo-1/130_raptor_overview (“DSTV export”).

23. Peddinghaus’s customers, including any third party detailers used by the customers, use 3D modeling software such as Tekla, SDS/2 and others to extract from the design model a plurality of component dimensions defining a plurality of components of the object. These dimensions are in the DSTV files that are created using Tekla, SDS/2 or other 3D

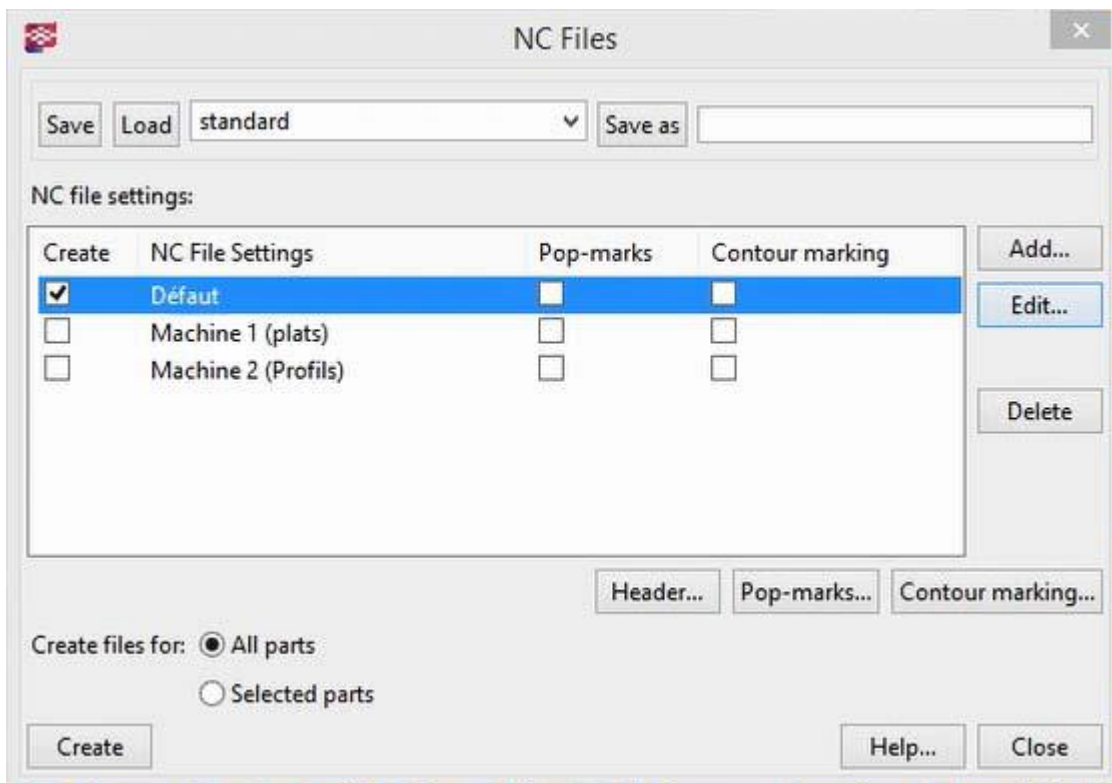
modeling software. For Tekla, for example, this is shown when a user goes to the “Create NC Files” command, which launches a dialog box such as shown below, and then clicks “Create” to create the DSTV files.



24. Also, Peddinghaus’s Raptor software reads the dimensions of each component as defined in each “.NC” (DSTV) file, where each file corresponds to a component. As explained on Peddinghaus’s website (https://www.peddinghaus.com/dstv-import-export/tekla-import/dxf-idstv-plus-dstv-plus-import-export/raptorinfo-1/133_raptor_module): “The DSTV Import Module is available for fabricators that are already utilizing BIM software such as Tekla, Design Data, StruCad, Steel Office, and much more. This module allows users to transfer the original design from the model into the common DSTV file standard. The DSTV file is then capable of being imported into Raptor via the DSTV Import Module for editing and modifying or CNC file

creation for execution on a machine.” Raptor’s 3D Editor allows a user to examine all the part data imported. (*Id.*, including 3D Module video, at 1:50-2:00.)

25. Peddinghaus’s customers, including any third party detailers used by the customers, use 3D modeling software such as Tekla, SDS/2 and others to identify a plurality of intersection and manufacturing parameters which define in part the intersection of the two components. With Tekla, the customer chooses the “Create NC Files” command from the File Export menu in Tekla, which launches the following dialog box:



26. One option in this dialog box is to generate “contour marking.” If that box is checked, and then the user clicks “Create,” an NC file (*e.g.*, DSTV file) is created that includes the contour marking information. That information appears in the “KO” blocks of the DSTV file.

27. A Peddinghaus customer using SDS/2 performs a similar operation. To generate DSTV files, the customer clicks “CNC” under the “Import/Export” section:



28. This then launches the following dialog box:



29. The customer may click the “Setup” button from this dialog box to specify detailing options, launching the following dialog box:

CNC Setup -- v7.332 (2) CAM-YOGA/5896

CNC Configuration: DSTV

Download options

- ☐ Disable error checking
- ☐ Batch download
- ☐ Allow special characters in filenames
- ☒ Download plain members (no holes or marks)
- ☒ List CNC items by face of operation
- ☒ Include layout marks in download
- ☐ Include attached submaterial in member download
- ☐ Use submaterial marks for members with multiple main material

Add holes: that match a hole: No

Provide error information for radius or cope holes: No

Move CNC marks on web far side: No

Download holes outside diameter range as: A mark

Download holes too close to edge, web, flange, bend, or another hole as: A mark

Replace slots with layout marks or holes: No

Use CNC piece quantity in: Job

Use dimensions from: Final length

Send out plate: Near side

Material Types

- ☒ Wide Flange
- ☒ Channel
- ☒ Angle
- ☒ W Tee / STee
- ☒ Pipe
- ☒ Tube / HSS
- ☒ Welded Sections
- ☒ Plate
- ☒ Bent plate
- ☒ Flat Bar
- ☒ Round Bar
- ☒ Cold Formed C / Z

CNC type: DSTV

Machine limits

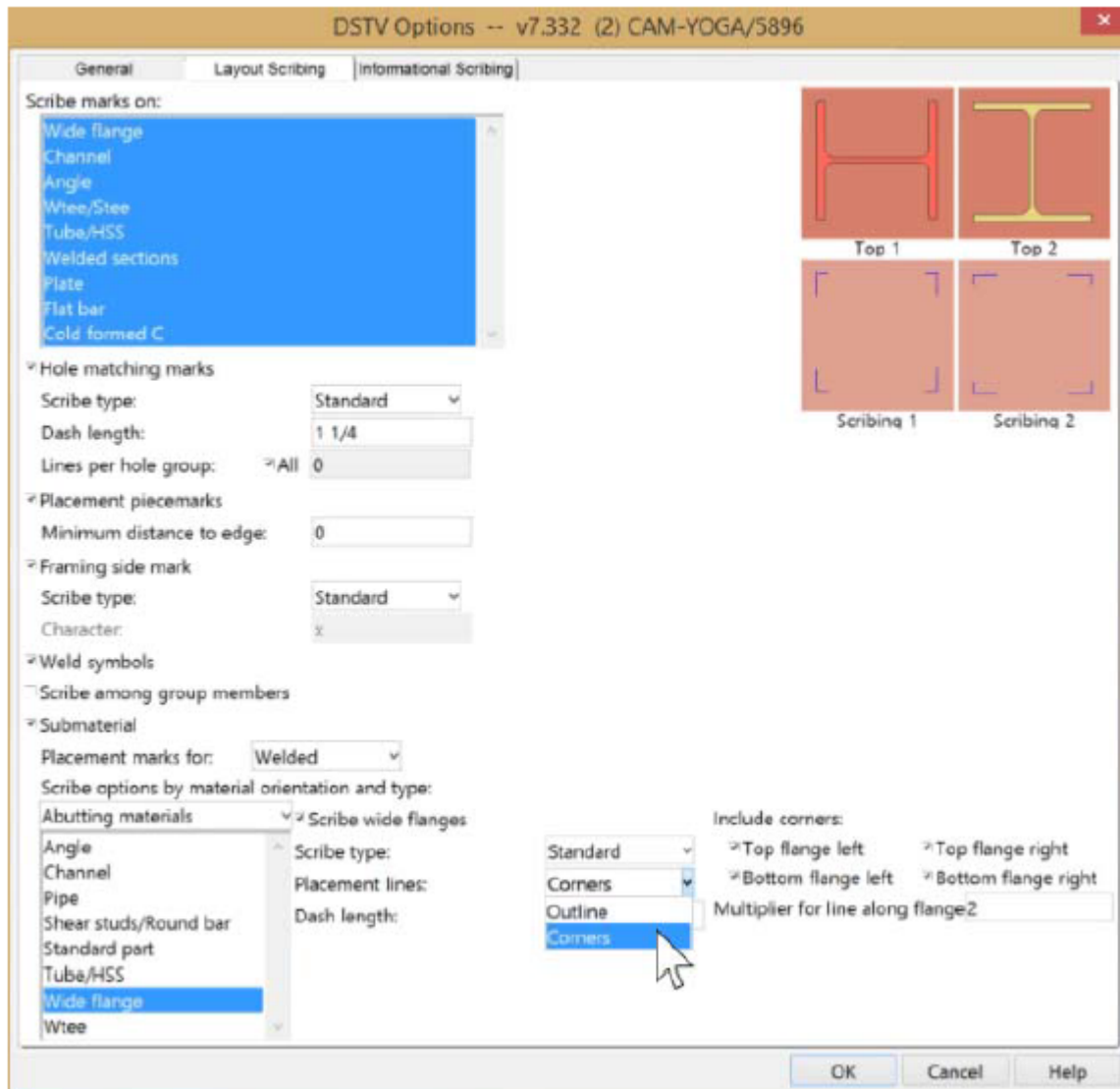
- Maximum material length: 999-0
- Minimum material length: 0
- Maximum material depth: 99-0
- Minimum material depth: 0
- Maximum flange thickness: 4
- Maximum web thickness: 4
- ☐ Force plate width and length to match model

Hole fabrication limits

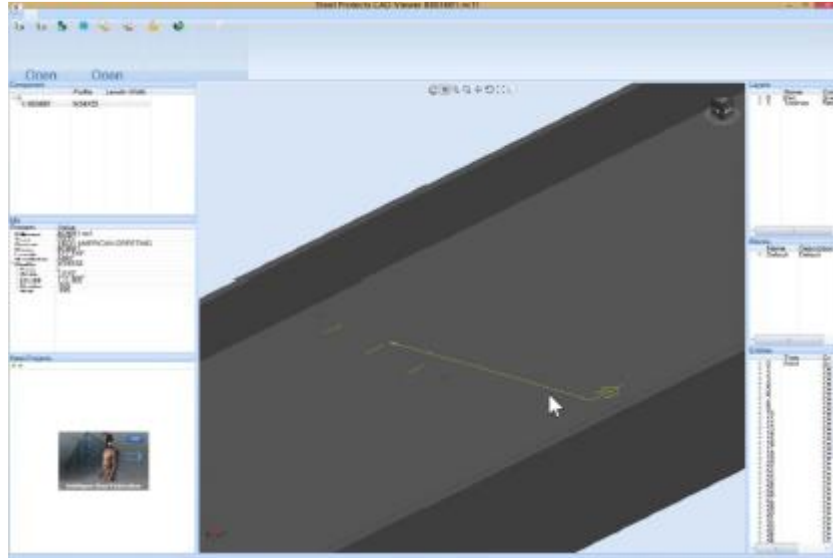
- Minimum allowable hole size: 1/16
- Maximum allowable hole size: 1 1/2
- Minimum hole to hole-edge distance: 1/4
- Minimum hole to material-edge distance: 1/4
- Minimum hole to radius clearance: 0
- Minimum spindle clearance for web holes or flange punches: 1 1/2
- Maximum amount of punch overrun: 0

Options Material Setup Reset Restore Defaults OK Cancel Help

30. Within this dialog box, the user may click the “Options” button to specify further options, launching the following dialog box:



31. The user may configure options within the “Layout Scribing” tab (for example, Submaterial) to indicate that layout marks should be generated according to intersection parameters.



32. Peddinghaus customers then import these DSTV files into Peddinghaus's Raptor software.

33. Peddinghaus customers also extract from the design model the intersection and manufacturing parameters. As described above, 3D modeling software such as Tekla, SDS/2 and others is used by the customers to identify the intersection and manufacturing parameters, and the above paragraphs also describe the extraction of those intersection and manufacturing parameters, which is the part of the process in which after the identification, there are DSTV files that contain this data, which is stored in the "KO" data blocks and sometimes other data also in the "SI" data blocks (with the software process that is running to create those DSTV files, analyzing the information in Tekla or SDS/2, performing the "identifying" of those parameters that are then placed into the DSTV files). Additionally, the Peddinghaus Raptor software reads this data in the DSTV files when they are imported, as mentioned above, and that is also an extraction, as the information from the DSTV files are written into tables in the database.

34. Peddinghaus's Raptor software processes intersection and manufacturing parameters and component dimensions from each .NC (DSTV) file, converts them into

programming instructions according to capabilities and configurations of each machine, and executes the programming instructions, which control physical operations of the CNC machines. This process thus includes transmitting the intersection and manufacturing parameters and the component dimensions from the programmable logic controller to at least one manufacturing machine. As described on Peddinghaus's website: "A Post Processor is an interface between CAD/CAM packages such as Raptor and a particular piece of equipment. It works as a translator, reading the manufacturing instructions issued from a CAM system and writing an appropriate rendition for that specific machine. This means that each machine requires a different Post Processor. If a machine has a Post Processor developed for it, Raptor can output files for that machine with no intermediary modules." (https://www.peddinghaus.com/dstv-import-export/tekla-import/dxf-idstv-plus-dstv-plus-import-export/raptorinfo-1/133_raptor_module#.)



(*Id.*)

35. Peddinghaus's CNC machines manufacture the components based at least partly on the transmitted component dimensions and the transmitted intersection and manufacturing parameters. The identified Peddinghaus CNC machines all scribe a line or lines, part numbers and other information according to the transmitted intersection and manufacturing parameters, on the steel components that are manufactured. Examples for each Peddinghaus CNC machine are described here:

- Peddiwriter: “This allows the machine to mark totally unique characters, on two separate surfaces simultaneously. Using this feature, the PeddiWriter ensures superior efficiency of 4 surface layout marking on a wide array of structural profiles.” (https://www.peddinghaus.com/automatic-layout-marking/structural-steel-fitters/cnc-layout-marking-system/products-1/111_peddiwriter.)



(Peddiwriter brochure at 5.)



(https://www.peddinghaus.com/automatic-layout-marking/structural-steel-fitters/cnc-layout-marking-system/products-1/111_peddiwriter#.)

- HSFDB-C Plate Processor includes “carbide scribing.”
(https://www.peddinghaus.com/cnc-bevel-cutting/bevel-cutting-plate-processor/bevel-cutting-plasma-machine/products-1/125_hsfdb_c#).
- HSFDB-B Plate Processor includes “signoscript carbide scribing” that is “[i]deal for part numbering or layout marking.” (HSFDB-B Plate Processor brochure at 6.)
- FPD-1120 Plate Processor includes “carbide scribing” for “part marking and layout destination.” (https://www.peddinghaus.com/plate-processing-system/structural-steel-plate-processor/cnc-plate-processor/products-1/122_fpd1120.)
- FPB-1800 Plate Processor includes “carbide scribing” for “part marking and layout destination.” (https://www.peddinghaus.com/plate-punching-machine/plate-punching/plate-punch/products-1/102_fpb.)
- Peddi XDM-630 Drill Line includes “4-Axis carbide scribing” which can be used for “Marking part numbers - visible after painting, galvanizing, or other coating processes,” “Designating weld locations,” and “Providing contour marks for manual cutouts.” (https://www.peddinghaus.com/drill-saw-combination/drill-saw/structural-steel/products-1/134_peddixdm630.)
- PCD-1100/3C – Advantage-2 Drill Line also includes the same 4-Axis carbide scribing features. (https://www.peddinghaus.com/drill-line/steel-drilling/drilling-machine/products-1/104_pcd3.)

- PCD-1100/3B - Advantage Drill Line includes “carbide scribing.”
(https://www.peddinghaus.com/beam-drill-line/cnc-structural-steel-drilling/structural-steel-equipment/products-1/105_pcd.)
- BDL-1250/9D Drill Line includes “4-Axis carbide scribing.”
(https://www.peddinghaus.com/beam-drill-line/cnc-structural-steel-drilling/structural-steel-equipment/products-1/106_bdld.)
- BDL-1250/9B Drill Line includes “carbide scribing.”
(https://www.peddinghaus.com/drill-line/steel-drilling/drilling-machine/products-1/107_bdl.)
- Anglemaster-HD Angle Line includes “Signoscript carbide scribing system” that is “[i]deal for part and layout marking.”
(https://www.peddinghaus.com/angle-punching-machine/angle-shearing-machine/angle-processing/products-1/124_afcps863.)
- Anglemaster-663 Angle Line including “SignoScript carbide scribing unit” that “marks layouts as well as characters using CNC precision.”
(https://www.peddinghaus.com/angle-line/anglemaster/steel-angle-machine/products-1/147_afcps663)
- AFPS-643/Q Angle Line includes “SignoScript carbide scribing” which “offers unmistakable accuracy when layout or part marking the surface of any angle or flat stock piece.” (https://www.peddinghaus.com/angle-processing-system/punching-and-shearing-angle-line-machine/angle-shear-system/products-1/110_afps643)

- Peddibot-1200 Thermal Cutting/Coping includes “Integrated Layout Marking” using “[m]ulti-axis plasma layout marking.” “[T]he Peddibot-1200 utilizes modern layout marking plasma technology.” (https://www.peddinghaus.com/steel-fabrication-robot/plasma-coping-robot/robotic-thermal-cutting-machine/products-1/136_peddibot.)
- Ring of Fire Thermal Cutting/Coping includes “Hypertherm Plasma ArcWriting” and thus is “capable of layout marking on all 4 surfaces of a profile using Hypertherm Plasma ArcWriting.” (Ring of Fire brochure at 5.) The specification describes this as “Layout Marking” using “4 Axis Hypertherm Plasma Marking. (*Id.* at 3.)
- Ocean Avenger Plus CNC Beam Drill Line includes “scribing layouts for welded attachments” (<https://www.oceanmachinery.com/solutions/avenger-plus-cnc-beam-drill-line.html>).

36. Peddinghaus’s customers thus use the Peddinghaus CNC machines, along with the Raptor software and third party 3D modeling software such as Tekla and SDS/2, in a manner that practices each step of at least claim 1 of the ’719 patent, and Peddinghaus encourages its customers to use the CNC machines, along with the Raptor software and third party 3D modeling software such as Tekla and SDS/2, in a manner that practices each step of claim 1 of the ’719 patent.

37. The above paragraphs also describe how, with Peddinghaus’s CNC machines and the third party 3D modeling software such as Tekla and SDS/2, Peddinghaus’s customers have an apparatus for automatic manufacture of an object, including each element of claim 7 of the ’719 patent.

38. The above paragraphs also describe how, with Peddinghaus's CNC machines and the third party 3D modeling software such as Tekla and SDS/2, Peddinghaus's customers have an article of manufacture, comprising a program storage medium which has computer-readable program code incorporated therein for automatic manufacture of an object, with the computer-readable program code including every limitation of claim 14 of the '719 patent.

39. The '719 patent, with the above-described improved systems and methods for the manufacture of construction components, such as steel beams, including for example by cutting or shaping the component or marking locations thereon based upon construction information that may be stored in a computer, was filed with the U.S. Patent and Trademark Office on June 6, 2007 (with a foreign application having been filed on June 9, 2006), and issued on July 5, 2011. The U.S. Patent Office carefully examined the claims that ultimately issued as the '719 patent. Consistent with 35 U.S.C. § 282 and the limitations of the claims of the '719 patent, a person having ordinary skill in the art would understand that each claim of the '719 patent (independent or dependent) relates to a separate invention distinct from other claims.

40. The U.S. Patent Office considered the claims of the '719 patent against the background of prior technology to determine if the claims of the '007 patent identified a patentable advance over prior art systems before issuing the patent. Among other things, the U.S. Patent Office searched multiple sets of prior art in classifications 700/95-98, 700/118-19, 700/163, 700/181-83, 703/1, 716/100, 716/110, and 716/118. The face of the '719 patent identifies some of the prior art from the classifications and other prior art considered in allowing the various claims of the '719 patent.

41. The claims of the '719 patent, when viewed as a whole, address a machine with – or connected in some manner or used in conjunction with – a computer or computers, which

together is used for automatic manufacture of components of a larger object. The components being manufactured by the machine may be steel parts that can later be connected together as part of a larger object, such as a steel building consisting of numerous connected steel beams and other steel components. With the '719 patent's method, apparatus and article of manufacture, certain intersection and manufacturing parameters are automatically identified, rather than requiring any human to have to analyze such information and manually program it into a machine, for example, and then based on those parameters, the components (such as steel beams and other connecting steel components) are manufactured, including, for example, by using those automatically identified parameters to scribe lines onto the steel components that indicate where one steel component is supposed to connect to another steel component, as well as other information such as part numbers, as part of the manufacturing limitation.

42. The claims of the '719 patent, when viewed as a whole, represent specific improvements over the prior art and prior existing methods, systems, apparatuses and articles of manufacture, and were not well known, routine, or conventional at the time of the invention. There were multiple problems faced by the inventors of the '719 patent in establishing their inventions. Methods, systems, apparatuses and articles of manufacture prior to the inventions of the '719 patent sometimes required a human to analyze and figure out intersection parameters using two dimensional drawings and then a person might use a tape measure to manually make marks on a component, which was a time consuming process. Or, methods, systems, apparatuses and articles of manufacture prior to the inventions of the '719 patent sometimes required a specialized human operator to manually program manufacturing machines with the information, with the machines then using the intersection parameters to manufacture components based on those components, including by placing intersection lines or other information on the

components, for example. In such a process, the human operator would have again first examined two dimensional drawings to analyze and identify the intersection parameters that would then be used by the human operator to manually program the manufacturing machines. A person of ordinary skill in the art would recognize that a computer uses a different process to perform such tasks than a human operator uses. The inventions of the '719 patent eliminated the need for a specialized human operator to perform such tasks. The inventions do so by automatically identifying the intersection parameters, extracting those intersection parameters that were automatically identified, and transmitting them to the manufacturing machine, which then takes those instructions and manufactures the components, including, for example, by using those automatically identified parameters to mark out lines onto the components, such as steel beams, that indicate where one component connects to another component. This improved efficiency and accuracy over prior processes. It also reduced the costs involved in such prior processes.

43. The inventions of the '719 patent include a full method, apparatus, and article of manufacture, which includes steps or elements that range from creating a design model, through various other steps and elements, including the identifying and extraction steps and elements described above, and then also including a manufacturing machine that manufactures the physical components, such as steel beams and pillars. The inventions claimed in the '719 patent are thus not generically directed to collecting, analyzing and manipulating data, but rather the claims would be understood by a person of ordinary skill in the art to recite concrete advancements in the technology pertaining to a specific method, apparatus and system for manufacturing components – such as steel beams and pillars – of an object with multiple intersecting components. The invention thus also cannot be performed by the human mind.

44. That the above features, when viewed as a whole, were specific improvements over the prior art and prior existing methods, systems, apparatuses and articles of manufacture, and were not well known, routine, or conventional at the time of the invention, is demonstrated, for example, by praise Ficep received for its invention. One example of such industry praise of Ficep is described in an article by Luke Faulkner, titled “Automated Layout in Steel Fabrication” in Modern Steel Construction (Nov. 2011).

45. That the above features, when viewed as a whole, were specific improvements over the prior art and prior existing methods, systems, apparatuses and articles of manufacture, and were not well known, routine, or conventional at the time of the invention, is also demonstrated, for example, by copying of the invention by others in the industry, including 3D modeling software companies such as Tekla adding features to their products so that companies in the steel industry could use such 3D modeling software as part of processes that copy the inventions of the ’719 patent.

46. That the above features, when viewed as a whole, were specific improvements over the prior art and prior existing methods, systems, apparatuses and articles of manufacture, and were not well known, routine, or conventional at the time of the invention, is also demonstrated, for example, by Ficep’s commercial success with its products that embody certain claims of the ’719.

47. That the above features, when viewed as a whole, were specific improvements over the prior art and prior existing methods, systems, apparatuses and articles of manufacture, and were not well known, routine, or conventional at the time of the invention, is also demonstrated, for example, by Ficep’s licensing of the ’719 patent.

48. A person of ordinary skill in the art would understand that the claims of the '719 patent did not pre-empt any field, but are improvements in the technology for manufacturing components of an object with multiple intersecting components. Manufacture of components of an object with multiple intersecting components, based on intersection and manufacturing parameters, could be performed without the technology described in the inventions of the '719 patent, including as described in the prior art mentioned above.

49. Ficep has sustained damages as a result of Peddinghaus's direct and/or indirect infringement of the '719 patent identified herein and Peddinghaus is liable for such damages in this action, including pre-suit damages.

50. Ficep has no adequate remedy at law for Peddinghaus's continued infringement of the '719 patent such that the Court must enjoin Peddinghaus from further acts of infringement.

51. On information and belief, Peddinghaus's direct and/or indirect infringement of the '719 patent is and has been willful and deliberate, justifying increased damages under 35 U.S.C. § 284. As stated above, Peddinghaus knew of the '719 patent, has continued to infringe the '719 patent after such knowledge, and knew or should have known that its conduct infringed the '719 patent. For example, on information and belief, in 2013, after a previous lawsuit was filed by Ficep against Voortman Corporation in February of that year, Peddinghaus informed Tekla of the '719 patent and Peddinghaus's opinion that Peddinghaus's products infringe the '719 patent claims, yet continued to infringe the '719 patent afterwards.

52. In addition, Peddinghaus's infringement of the '719 patent is exceptional and entitles Ficep to an award of attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

PRAYER FOR RELIEF

WHEREFORE, Ficep requests that this Court enter judgment as follows ordering that:

- (a) Defendant infringes the '719 patent by making, using, offering for sale, selling and/or offering to sell products covered by the '719 patent claims within the United States, and/or by contributing to or inducing such infringement;
- (b) Defendant's infringement of the '719 patent' is willful;
- (c) Defendant and its affiliates, subsidiaries, officers, directors, employees, agents, representatives, licensees, successors, assigns, and all those acting for any of them or on their behalf, or acting in concert with them, be preliminarily and permanently enjoined from further infringement of Plaintiff's patent rights
- (d) Plaintiff be awarded compensatory damages and costs, with prejudgment interest;
- (e) Plaintiff be awarded treble damages for the willful patent infringement;
- (f) This case be declared to be exceptional in favor of Plaintiff under 35 U.S.C. § 285, and that Plaintiff be awarded their costs, attorneys' fees, and other expenses incurred in connection with this action; and
- (g) Plaintiff will be awarded such other relief as the Court deems just and proper.

JURY DEMAND

Ficep demands a trial by jury on all issues so triable.

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DATED: June 18, 2020

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CERTIFICATE OF SERVICE

I, Robert M. Vrana, hereby certify that on June 18, 2020, I caused to be electronically filed a true and correct copy of the foregoing document with the Clerk of the Court using CM/ECF, which will send notification that such filing is available for viewing and downloading to the following counsel of record:

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I further certify that on June 18, 2020, I caused the foregoing document to be served via electronic mail upon the above-listed counsel and on the following counsel:

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