IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

QUEST INTEGRITY USA, LLC,	)	
	)	
Plaintiff,	)	C.A. No. 14-1481 (SLR)
	)	
v.	)	JURY TRIAL DEMANDED
	)	
A.HAK INDUSTRIAL SERVICES USA LLC,	)	
	)	
Defendant.	)	

FIRST AMENDED
COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Quest Integrity USA, LLC ("Quest"), states the following facts in support of its First Amended Complaint against Defendant A.Hak Industrial Services US LLC ("A.Hak" or "Defendant") for infringement of U.S. Patent No. 7,542,874 ("The '874 patent"), entitled "2D and 3D Display System and Method for Furnace Tube Inspection." This action is one of three related patent infringement cases that Quest filed in this Court on December 15, 2014 seeking injunctive relief and damages for infringement of Quest's rights under the '874 Patent. The two other related cases are: *Quest Integrity USA LLC v. Cokebusters USA Inc*. (DED-1-14-cv-01483; District Judge Sue L. Robinson); and *Quest Integrity USA LLC v. Clean Harbors Industrial Services Inc.* (DED-1-14-cv-01482; District Judge Sue L. Robinson).

THE PARTIES

1. Plaintiff Quest Integrity USA, LLC is a limited liability company organized and existing under the laws of Texas and having its principal place of business in Kent, Washington.

2. A.Hak Industrial Services US LLC is a limited liability company organized and existing under the laws of the State of Texas and having its principal place of business in Houston, Texas.

JURISDICTION AND VENUE

3. This civil action arises under the Patent Laws of the United States, 35 U.S.C § 1, *et. seq*. Accordingly, this Court has original subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

4. A.Hak is subject to this Court's personal jurisdiction pursuant to due process and the Delaware Long Arm Statute because A.Hak's predecessor in interest (A.Hak Industrial Services USA LLC) availed itself of the rights and benefits of Delaware by incorporating under Delaware law for many years, and the business of A.Hak is substantially the same today.

5. Venue is proper in the District of Delaware pursuant to 28 U.S.C. §§ 1391(b), 1391(c) and 1400(b).

THE PATENT-IN-SUIT

6. The '874 Patent is entitled "2D and 3D Display System and Method for Furnace Tube Inspection." On June 2, 2009, the United States Patent Office issued the '874 Patent after full and fair examination. A true and correct copy of the '874 Patent is attached hereto as **Exhibit A** and incorporated herein by reference. The '874 Patent is valid and enforceable.

7. Quest is the owner of the entire right, title, and interest in and to the '874 Patent, and has the exclusive right to sue for infringement and recover damages for all past, present, and future infringement.

THE RELEVANT TECHNOLOGY

8. Across the United States, nearly 150 refineries convert raw petroleum into end-products such as jet fuel, diesel oil, and the like. These products are then sold to consumers.

9. Generally, refineries use so-called "furnaces" to heat the process fluids to extremely high temperatures and convert the raw petroleum into end-products. A furnace is

comprised of a heat source with between several hundred and several thousand feet of serpentine tubing ("furnace tubes") stacked above and around the heat source.

10. Periodically, refineries are required to shut down furnaces for scheduled cleaning, inspection, and maintenance. The goal of any refinery is to finish the planned "turnaround" as quickly as possible so the refinery can get back to making end-products.

11. When petroleum is heated to high temperatures, it leaves a carbonaceous deposit referred to as "coke", within the furnace tubes. In the cleaning phase of furnace downtime, refineries hire third parties to remove coke from the interior of the furnace tubes, a process referred to as "de-coking." De-coking is necessary as coke buildup causes a decrease in thermal efficiency within the furnace and a resulting decrease in refinery capacity. Additionally, excessive coke buildup can cause safety hazards by increasing localized damage on furnace tubes.

12. To de-coke the furnace tubes in the cleaning phase, most refineries use "cleaning pigs." Cleaning pigs have a similar diameter to the inside of the furnace tubes, and have bristles, brushes, or other mechanisms that scrub tube walls as they pass through. To use the cleaning pigs, the furnace must first be shut down; the cleaning pigs are then inserted into the furnace tubes and pushed by forcing water through the furnace tubes behind the pigs. The three defendants in this and two related actions (Clean Harbors, Cokebusters and A.Hak) have offered de-coking services to refineries, and the competition between them is fierce.

13. In the inspection phase of furnace downtime, furnace tubes are inspected. The inspection takes place after the de-coking process is complete, and while the refinery is shut down for scheduled maintenance. Inspection detects (and therefore prevents) potentially

catastrophic leaks or ruptures; inspection is also mandated by governmental regulation. If furnace tubes have serious flaws, they can rupture and leak product, or even cause an explosion.

14. Generally, furnace tubes are inspected in one of two ways: from the outside of the furnace tube or from the inside of the furnace tube.

15. Inspection of the *outside* of the furnace tube is commonly done by "spot checking": external physical inspection of supposedly representative spots by humans using tools. Spot checking does not provide a complete review of the furnace tube – only the "spots" where the human checks. Further, because spot checking is not repeatable with precision, it is very difficult to measure furnace tube wear over time.

16. Inspection of the *inside* of the furnace tube is usually done by sending through a pig equipped with inspection sensors ("inspection pigs"). Inspection pigs use sensors (commonly ultrasonic transducers) to measure tube diameter and wall thickness, and to detect flaws or abnormalities

17. Before the '874 Patent, inspection pigs produced tables of numeric data that contained sensor readings for every data point collected by the inspection pig. The inventors of the '874 Patent observed that the data collected by the inspection pigs resulted in a tabular spreadsheet of numbers that required a trained engineer to interpret. The inventors further observed that this spreadsheet could contain hundreds of thousands of data point entries representing individual wall thickness measurements taken at different intervals. The inventors further realized that it was difficult to understand and locate flaws identified by the inspection pigs from simply looking at the spreadsheet of data point entries.

18. The priority application for the '874 Patent was filed on June 1, 2004, and the utility application issued on June 2, 2009. As discussed in greater detail below, the '874 Patent

describes a system and method for displaying information collected during this critical inspection phase in a manner that solves a number of the problems associated with prior furnace tube inspection systems.

19. The commercial embodiment of Quest's '874 Patent is its FTIS™ furnace tube inspection system. Quest's FTIS™ furnace tube inspection system drastically improved the efficacy and efficiency of the furnace tube inspection process; it is the *only* furnace tube inspection system that enables all of the major refinery stakeholders to make immediate, actionable decisions with hyper-accurate data, which is repeatable over time.

20. Quest's FTIS™ furnace tube inspection system minimizes refinery downtime by enabling refinery stakeholders to make immediate, actionable decisions *on the spot*:

- On the spot, a reliability or maintenance manager can easily see the nature and extent of any problem and make an assessment of whether, and how much, furnace tubing needs to be replaced.

- On the spot, if a reliability or maintenance manager needs to consult with others before making a significant financial and refinery operations commitment to repair furnace tubes, the manager can send the results to superiors or managers at other, sister-refinery locations to get the benefit of colleagues' feedback. This allows managers to make the most informed decisions, again, immediately. Further, being able to immediately share information about new-found problems with sister-refineries – especially those problems related to global safety or global design issues – ensures these problems are immediately addressed across sister-refineries.

- On the spot, refinery maintenance crews (tasked with replacing the damaged furnace tubes) can be standing by to proceed with replacement immediately after receiving instructions from the plant engineer for precise removal and replacement of damaged tubes. The refinery maintenance crews are able to walk straight to the furnace tube section that needs to be replaced and begin work.

21. As a result of its investment in its FTIS™ furnace tube inspection system and its unprecedented efficacy and effectiveness, Quest overcame entrenched industry skepticism and, thereby, profound resistance to its new product and service.

22. Over the past nine years, Quest has invested substantial time, expertise and money to market and promote its industry-leading FTIS™ furnace tube inspection system, and has grown to become the industry leader. Quest's FTIS™ furnace tube inspection system is now well known in the marketplace as technology that provides a distinct advantage over competing furnace tube inspection systems; it is widely regarded as a "best practice" standard by industry leaders. In sum, Quest is the industry leader in inspection methods and technology.

23. Quest's advertising literature for Quest's FTIS™ furnace tube inspection system correctly identifies the '874 Patent as covering aspects of Quest's FTIS™ furnace tube inspection system. A true and correct example of such literature is attached as **Exhibit B**.

24. For many years, other market participants respected Quest's rights in the '874 Patent.

25. Recently, however, Quest learned that others have begun offering infringing furnace tube inspection systems.

26. In fact, it appears that *merely to gain market share in the de-coking market alone*, the three defendants in this and two related actions have very recently started to sell infringing furnace tube inspections systems. Traditionally, the three defendants have offered furnace tube *de-coking* services, rather than *inspection* services. But the three defendants now appear to have chosen to offer infringing furnace tube *inspection* systems in order to obtain collateral advantage in their competition in the market for furnace tube *de-coking* services. By bundling infringing

inspection systems with their existing de-coking services, the three defendants sell refineries an "all-in-one" package.

27. Indeed, the three defendants in this and two related actions appear to be offering their infringing inspection services to pre-existing Quest customers at little or no cost – merely to acquire refineries as customers for their lucrative de-coking services. In fact, refinery customers who traditionally purchased Quest's FTIS™ furnace tube inspection system services have recently purchased infringing furnace tube inspection systems offered by the three defendants.

28. These purchases have resulted in Quest's loss of profits, loss of market share, loss of reputation, loss of good will, and other damages to Quest. Further, the infringing furnace tube inspection systems are inferior to Quest's FTIS™ furnace tube inspection system (and will therefore damage goodwill developed in Quest's FTIS™ furnace tube inspection system), and the low cost availability of these infringing services has already hurt Quest's sales revenue.

29. Quest will soon seek preliminary injunctive relief enjoining infringement by all three defendants in this and two related actions during the pendency of this action – including the Defendant named in this discrete Complaint.

30. Preliminary injunctive relief will prevent significant, irreparable injury to Quest's protected interests. Absent prompt injunctive relief, Quest will undoubtedly suffer irreparable injury from price erosion, loss of market share, lost investment in labor force, and loss of good will. Preliminary injunctive relief will not harm the public interest; rather, it will *serve* the public interest because Quest's FTIS™ furnace tube inspection system helps prevent operational accidents that present significant risk to human health and the environment. Quest is more than capable of serving all market demand.

31. Preliminary injunctive relief will cause trifling injury to the three defendants in this and two related actions. The primary benefit to the defendants in offering their infringing inspection services is to gain advantage over one another in the de-coking market. If, however, all of the three defendants in this and two related actions are enjoined, no company in the de-coking market will be able to offer the patented inspection services -- the three defendants will therefore once again be on a level playing field of competition with each other in the market for de-coking services.

32. Specifically, preliminary injunctive relief will not injure A.Hak, because A.Hak does not offer furnace tube inspection services as its primary line of business, and because only a negligibly small portion of A.Hak's annual revenue is derived from furnace tube inspection services.

33. To be clear, Quest does not seek to stop A.Hak's furnace tube inspection services completely, but rather, only the furnace tube inspection systems that infringe Quest's '874 Patent. While preliminarily enjoined, A.Hak will still be able to perform furnace tube inspections in a myriad of other, non-infringing ways, all of which are well-documented in the prior art, and all of which are known to the three defendants in this and two related actions.

DEFENDANT'S KNOWLEDGE OF THE '874 PATENT

34. A.Hak has recently become a direct competitor of Quest in the market for furnace tube inspection services. A.Hak calls upon, and offers to sell, the same services as Quest to the same customers as Quest.

35. A.Hak's General Manager is Steven Morrison. Mr. Morrison is a former employee of Quest's corporate predecessor.

36. Quest formerly sued Steven Morrison to prevent the theft and use of certain intellectual property. The subject matter of that suit did not involve the '874 Patent.

37. Steven Morrison knew and was informed of the patent application that ultimately issued as the '874 Patent on June 2, 2009.

38. Upon information and belief, at least as of the date of associating with Mr. Morrison, A.Hak knew and was informed of the patent application that ultimately issued as the '874 Patent on June 2, 2009.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 7,542,874

39. Quest incorporates by reference the allegations in the paragraphs above.

40. Defendant is directly infringing the '874 Patent by making, using, offering for sale, or selling products that infringe the '874 Patent, including, but not limited to, Defendant's "Furnace Piglet" with "A-Scan Data" furnace tube inspection service.

41. Defendant's infringement of the '874 Patent has caused, and continues to cause Quest both monetary damage and irreparable injury that has no adequate remedy at law. Defendant's infringement of the '874 Patent will continue unless enjoined by this Court.

42. Defendant's foregoing infringement qualifies as exceptional within the meaning of 35 U.S.C. § 285.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Quest Integrity USA, LLC respectfully requests this Court to:

A. Enter judgment that the '874 Patent was duly and legally issued, is valid, enforceable, and has been infringed by Defendant A.Hak;

B. Issue a preliminary injunction restraining Defendant, its directors, officers, agents, employees, successors, subsidiaries, assigns, affiliates, and all persons acting in privity, concert, or participation with any of the above from the continued infringement of the '874 Patent;

C. Issue a permanent injunction restraining Defendant, its directors, officers, agents, employees, successors, subsidiaries, assigns, affiliates, and all persons acting in privity, concert, or participation with any of the above from the continued infringement of the '874 Patent;

D. Award Quest damages, in an amount to be determined at trial, together with interest and costs as fixed by this Court;

E. Declare this case exceptional and grant Quest its reasonable attorneys' fees under 35 U.S.C. § 285;

F. Grant Quest such other and further relief as this Court deems just and proper.

JURY DEMAND

Under Rule 38 of the Federal Rules of Civil Procedure, Quest requests a trial by jury of any issues so triable by right.

MORRIS, NICHOLS, ARSHT & TUNNELL LLP

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January 7, 2014
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CERTIFICATE OF SERVICE

I hereby certify that on January 7, 2015, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system which will send notification of such filing to all counsel of record.

I hereby certify that I have mailed by United States Postal Service the document to the following non CM/ECF participants:

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I hereby certify that I will serve, by hand, the document on the following non CM/ECF participant and registered agent of Defendant:

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