U.S. Mock Trial

The Honorable Richard Linn
United States Court of Appeals
for the Federal Circuit

Maxwell A. Fox
Jones Day

Ryan S. Goldstein
Quinn Emanuel
Urquhart & Sullivan

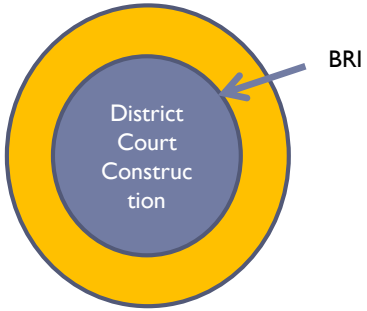
Where are you Litigating?

- District Court

- Patent Office (validity only)
  - *Inter partes* review (IPR)
  - Post-grant review (PGR)
  - Covered business method review (CBM)

Differences Between District Court and AIA Proceedings

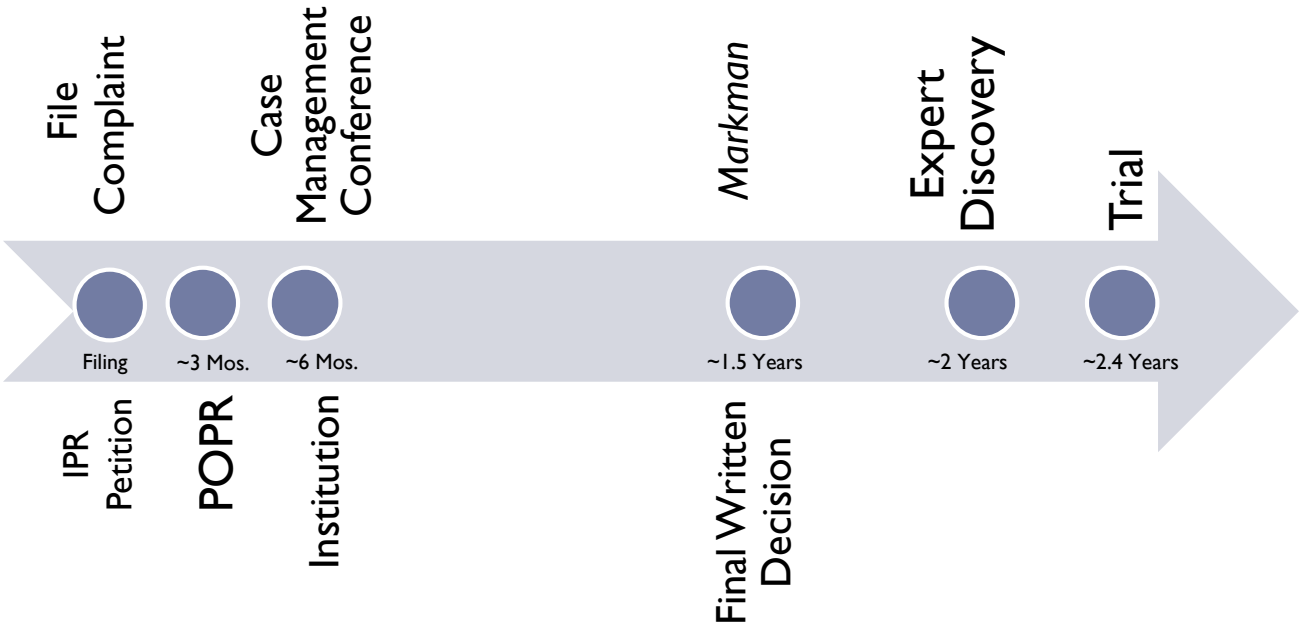
- Available Issues
- *Standard of Proof*
- *Claim Construction*
- Standing
- Amendment
- *Schedule*
- Settlement
- Discovery
- Live Witnesses
- Decision-maker
- Cost
- Standard of Appellate Review



	District Court	PTAB
Standard of Proof	"clear and convincing"	"preponderance of the evidence"
Claim Construction	"ordinary meaning as understood by a person of skill in the art"	"broadest reasonable construction in light of the specification" (for now)

Differences Between District Court and AIA Proceedings

	District Court	PTAB
Schedule	average of 2.4 years *to trial* (but varies depending on court)	generally no more than 18 months



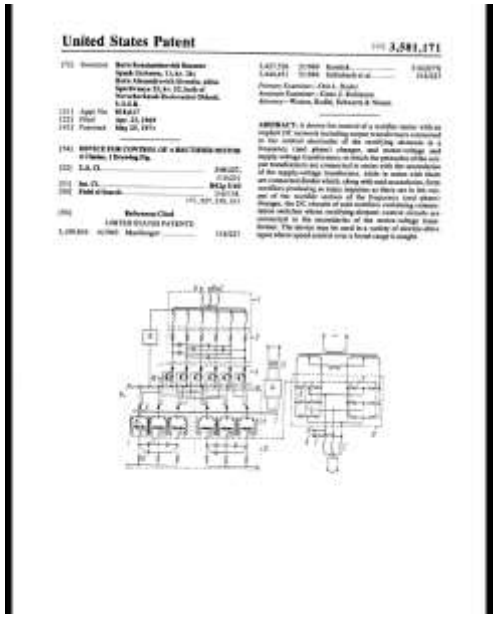
You've been sued. Do you bring an IPR?

- One year to file a petition

- IPR estoppel: "any ground that the petitioner raised or reasonably could have raised during that inter partes review"

- District-court stay
  - (A) Will IPR simplify the issues and streamline trial?
  - (B) Discovery complete? Trial date?
  - (C) Undue prejudice? Clear tactical advantage?
  - (D) Reduce burden of litigation?

Reading a Patent


United States Patent 3,581,171

- "The Name of the Game is the Claim"

Original Claim 1

A: A piston compressor,

B: which has rotary valves(6), has rotary shafts(2) that are integrated with said rotary valves(6) and has a shaft hole(5) that accommodates said rotary valves(6) in a rotatable manner,

C: which causes pistons(4) to make reciprocal motions through swash plates(1) in accordance with the rotation of said rotary shaft(2),

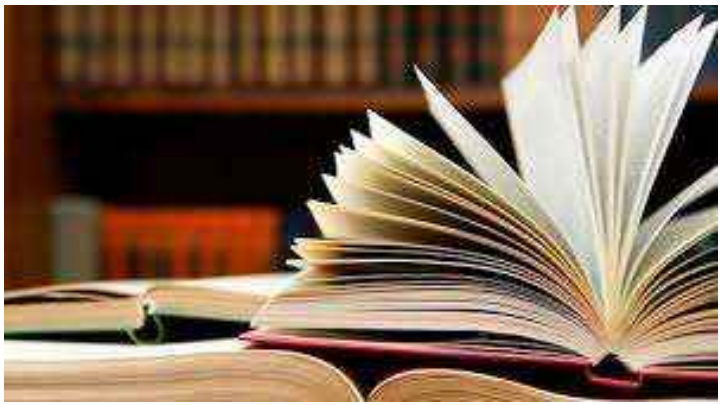
D: said shaft hole(5) has, on the inner peripheral surface, the inlets of suction passages(13) to intake refrigerant into compression chambers(3),

E: said rotary valves(6) have, on the outer peripheral surfaces, the outlets of introduction passages(12) that intermittently communicate with the inlets of said suction passages(13) in accordance with the rotation of said rotary shafts(2),

F: the inner peripheral surface of said shaft hole(5) directly supports the outer peripheral surfaces of said rotary valves(6) and the clearance between them is set as less than 20μm.

Claim Construction Considerations

- Intrinsic Evidence
  - Other claims
  - Specification
  - Prosecution history
- Expert Testimony



- Extrinsic evidence
  - Dictionaries
  - Learned treatises
  - Testimony
- Further possibilities
  - Lexicography
  - Disavowal
  - Disclaimer

Grounds for Invalidating a Patent

- Section 101: Not patentable subject matter
- Section 102: Previously known to the public
- Section 103: Obvious to the person having ordinary skill in the art
- Section 112: Not useful, sufficiently disclosed, or enabled
- Judicially created grounds

Validity

Is it Obvious?

- "The scope and content of the prior art"
- "Differences between the prior art and the claims at issue"
- "The level of ordinary skill in the pertinent art"
- "Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, teaching away, copying, and other relevant factors."

Infringement

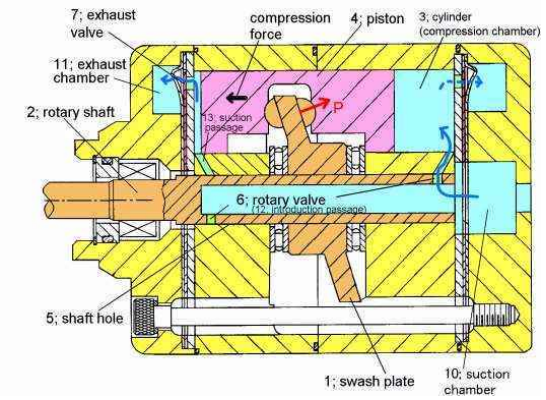
- Construe claims
- Compare claims and the device
  - Every element
  - Literal infringement?
  - Doctrine of equivalents?

Construe Claims

1. … F: the inner peripheral surface of said shaft hole(5) directly supports the outer peripheral surfaces of said rotary valves(6) and the clearance between them is set as less than 20μm.

2. … cylindrically shaped …

'710 Patent Diagram



'710 Patent [0003]

"the problem that refrigerant leaks into the clearance"

cylindrically-shaped except for the outlets

'710 Patent prosecution history

"The tilt of a rotary shaft(2) could be prevented if ***all clearance*** was being set as less than 20μm, between the inner peripheral surface of the shaft hole(5) and the outer peripheral surfaces of the rotary valves(6)."

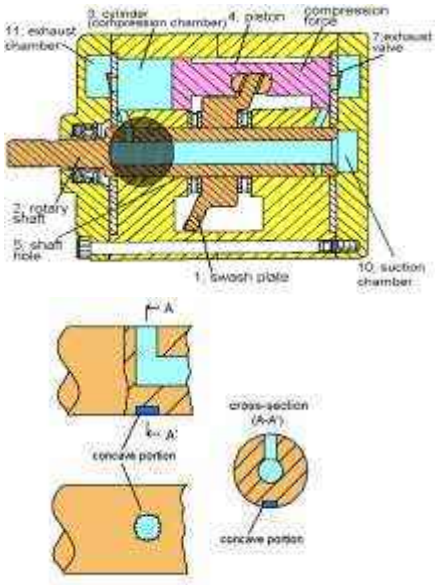
Compare Claims and Device

1. … F: the inner peripheral surface of said shaft hole(5) directly supports the outer peripheral surfaces of said rotary valves(6) and the clearance between them is set as less than 20μm.

2. … cylindrically shaped …

VS

Product Y



PTO Proceedings

- Defendant sought *inter partes* review of the '710 Patent, arguing that the '710 Patent was invalid in view of Gazette 085 and Gazette 165
- The Patent Office construed two terms with their broadest reasonable interpretation:
  - "*Directly supports*" has its plain and ordinary meaning
  - "*Cylindrically shaped*" means a tubular shape with a circular cross-section.
- Patent Trial and Appeal Board determined that the '710 Patent claims are valid

Validity of the '710 Patent is Undisputed

- Defendant is now estopped from challenging the validity of the '710 Patent on any grounds that were "raised or reasonably could have been raised" during the IPR
- Thus, the Parties agree that validity is not at issue in the instant litigation

Markman Positions – BRI vs. Phillips

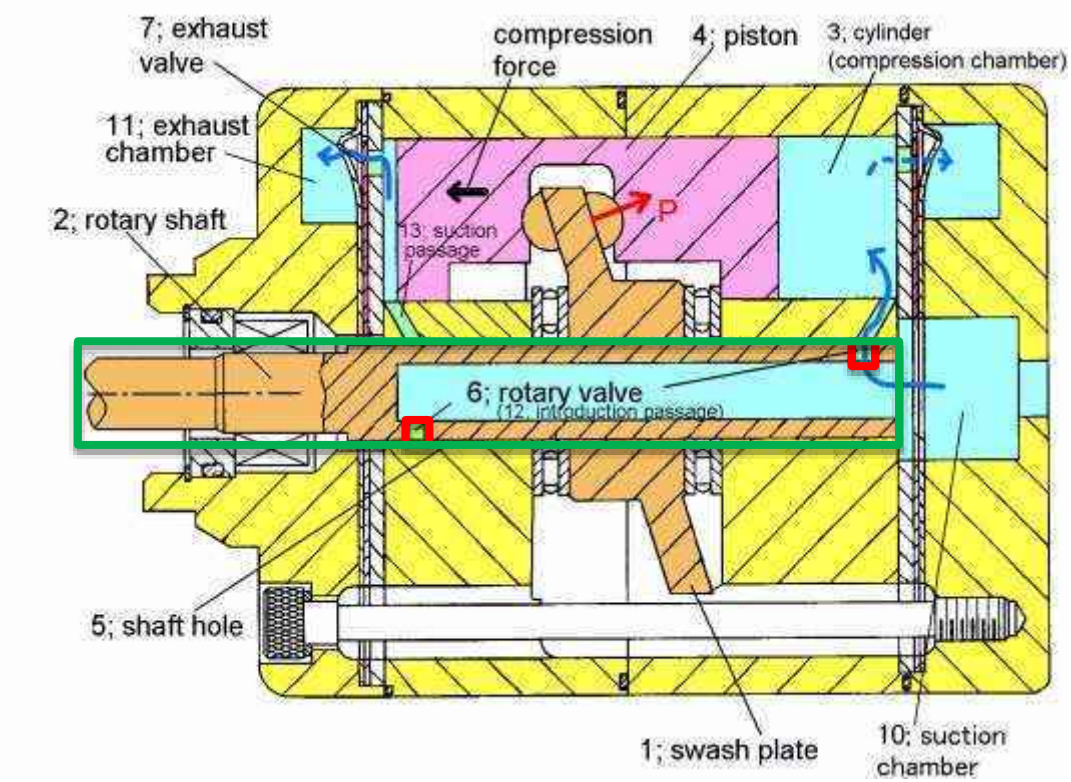
Claim Term	Pony's Construction	Donkey's Construction
Directly supports"	Plain and ordinary meaning	"Supports without reliance on any other means"
"Cylindrically shaped"	"Tubular shape with a circular cross-section"	"having a perfectly cylindrical shape"

Donkey's expert, Dr. Asaji, submitted a declaration stating:

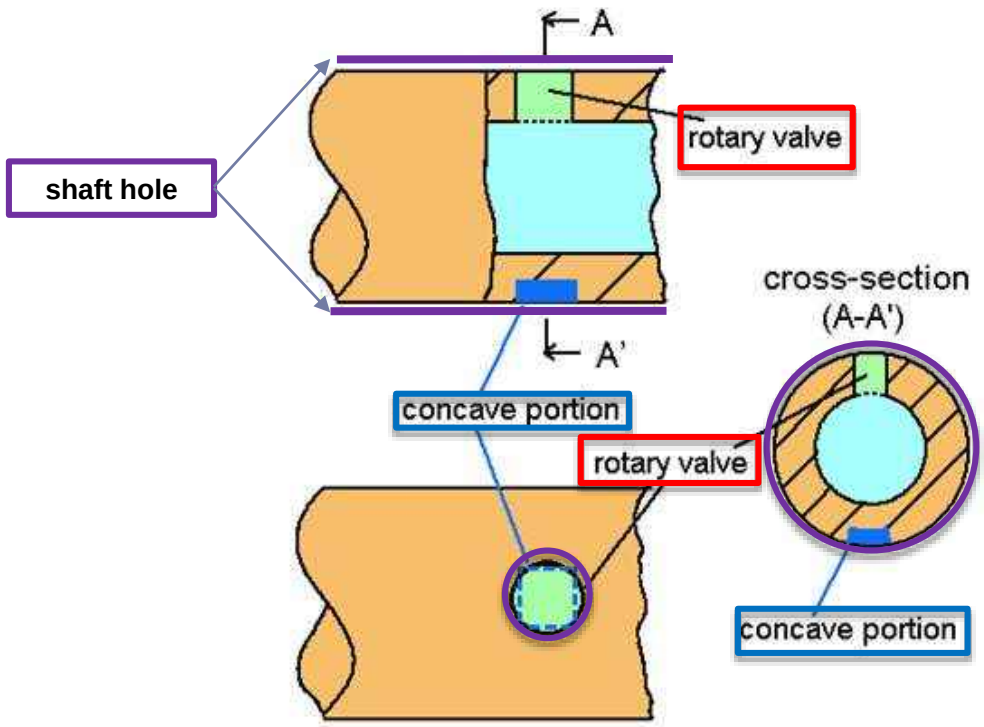
My name is Shogo Asaji.

1. I hold a PhD in mechanical engineering and have 30 years of experience designing compressors.
2. Based on my experience, a person of ordinary skill in the rotary valve art would construe the terms (a) "directly supports" to mean "supports without reliance on any other means," and (b) "cylindrically shaped" to mean "having a perfectly cylindrical shape."
3. I base my opinion on my review of the patent, its file history, and the Dictionary of Mechanical Terms.
4. I also base my opinion on my understanding of how these terms are used by people in the industry.
5. In my opinion, giving these terms the broad meaning adopted by the USPTO would be incorrect and unreasonable.

’710 Patent


7; exhaust valve
compression force
4; piston
3; cylinder (compression chamber)
11; exhaust chamber
2; rotary shaft
13; suction passage
P
6; rotary valve
(12; introduction passage)
5; shaft hole
1; swash plate
10; suction chamber

Product Y


A
shaft hole
rotary valve
cross-section
(A-A')
A'
concave portion
rotary valve
concave portion

Product Y Infringes Claim 1 of the ’710 Patent

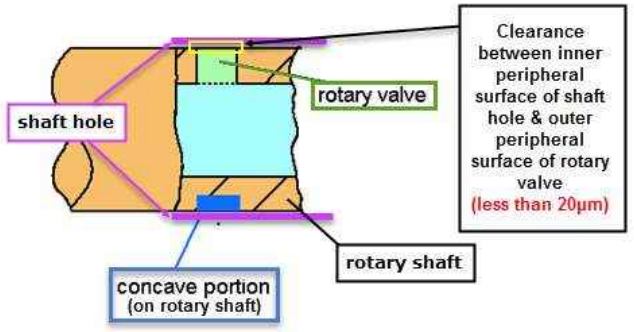
CLAIM 1	INFRINGED
A A piston compressor,	✓
B which has rotary valves, has a rotary shaft that is integrated with said rotary valves and has a shaft hole that accommodates said rotary valves in a rotatable manner,	✓
C which causes pistons to make reciprocal motions through swash plates in accordance with the rotation of said rotary shaft,	✓
D said shaft hole has, on the inner peripheral surface, the inlets of suction passages to intake refrigerant into compression chambers,	✓
E said rotary valves have, on the outer peripheral surfaces, the outlets of introduction passages that intermittently communicate with the inlets of said suction passages in accordance with the rotation of said rotary shafts,	✓
F the inner peripheral surface of said shaft hole directly supports the outer peripheral surfaces of said rotary valves and the clearance between them is set as less than 20μm.	

The Prosecution History And Claims Are Directed Solely to Clearance of Shaft Hole and Rotary Valve, Not Rotary Shaft

- **Pony Explained to Patent Office the Issue is the Clearance Between Shaft Hole and Rotary Valve:** "The tilt of a rotary shaft(2) could be prevented if all clearance was being set as less than 20μm, between the inner peripheral surface of the shaft hole(5) and the outer peripheral surfaces of the rotary valves(6)."

- **Claim Issues Focusing Solely On Shaft Hole and Rotary Valve: Claim Limitation 1F: "**the inner peripheral surface of said shaft hole directly supports the outer peripheral surfaces of said rotary valves and the clearance between them is set as less than 20μm."

- **No Discussion of Rotary Shaft**
  - Defendant's own schematics identify the rotary shaft and rotary valve as distinct.
  - Presumption that different claim terms mean different things.
  - Prosecution history discussing rotary valve and shaft hole does not support interpretation of rotary shaft requiring perfectly shaped cylinder with no recesses.

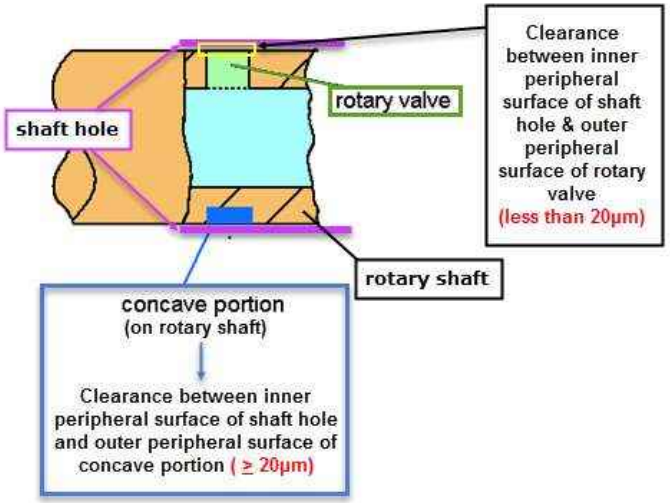


Product Y Meets Claim Limitation 1F

CLAIM 1	INFRINGED
1F the inner peripheral surface of said shaft hole directly supports the outer peripheral surfaces of said rotary valves and the clearance between them is set as less than 20μm.	✔

- **Infringement #1:** Product Y infringes because it is undisputed that clearance between inner peripheral surface of the shaft hole and outer peripheral surface of said rotary valves is less than 20μm. Concave portion is not on rotary valve and is irrelevant to infringement analysis.

- **Infringement #2:** Product Y still infringes because Defendant admits that the clearance between inner peripheral surface of the shaft hole and outer peripheral surface along rotary shaft is less than 20μm at all points except at concave portion.



Product Y Infringes Claim 2 of the ’710 Patent

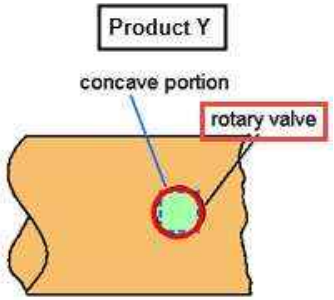
CLAIM 2	INFRINGED
2. [A piston compressor according to Claim 1, wherein] the outer peripheral surfaces of said rotary valves are cylindrically-shaped, except for the outlets of said introduction passages.	✓

- Only dispute is whether Product Y’s outer peripheral surface of the rotary valves are cylindrically-shaped.

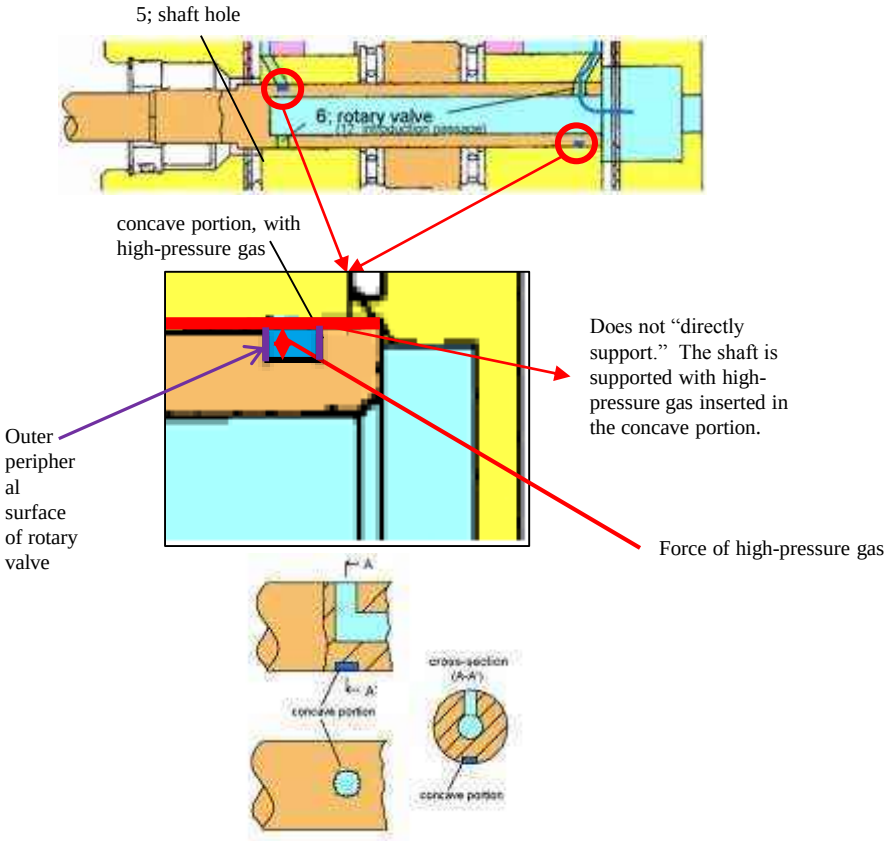
- **Infringement #1:** Outer peripheral surface at rotary valve is unquestionably cylindrical, as depicted in schematic.

- **Infringement #2:** Defendant concedes that “most” of the outer peripheral surface of the rotary valve is cylindrically-shaped, except at the concave portions.

  - Claim 2 requires the outer peripheral surface of the rotary valves to be “cylindrically-shaped.” **Plain and ordinary meaning** of “cylindrically-shaped” does not require that the outer peripheral surface be a perfect cylinder.



Product Y Does Not Literally Infringe Claim 1 or 2



- **Claim Construction**:
  - "*Directly supports*" = without anything besides clearance (e.g., no bearings/gas-filled concave portions)
  - "*Outer peripheral surfaces of said rotary valves*" ≠ "outlet"
- **Product Y**:
  - Inner shaft does not give "direct support"
  - Clearance more than 20μm
  - Not "cylindrically-shaped, except for the outlets of said introduction passages(12)"

Product Y Does Not Infringe Under the Doctrine of Equivalents Either

- "Directly supports" – Product Y functions in a substantially different way
- "Clearance ... is set as less than 20μm" – Prosecution estoppel

Rejection

> "The invention for which a patent is sought is not explained in the description since the description only shows an invention in which clearance is being set as less than 20μm."

Amendment

> Added: "the clearance between them is set as less than 20μm"

Applicant's Remarks

> "the element 'the clearance between them is set as less than 20μm' was added. The tilt of a rotary shaft(2) could be prevented if all clearance was being set as less than 20μm, between the inner peripheral surface of the shaft hole(5) and the outer peripheral surfaces of the rotary valves(6)."