

A Global Vision for the Noise Control Marketplace

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Noise Control – *History of Government Action*

- Legacy of 25 years of Government Action

Significant advancements

- Regulation of industry
 - Establishment of community and workplace standards
 - Promotion of research and development
- Status of noise regulation enforcement
 - Closure of ONAC
 - Changed emphasis of OSHA
 - Reduction of closure of State sponsored noise programs

Globalization of the Marketplace

- Increasing internationalization of markets
 - Industrial equipment
 - Consumer goods
 - Automobiles and aircraft
- Competitive factors include emitted noise
 - European community markets mandate noise levels
ECC Machinery Safety Directive
 - US markets increasingly demand low noise specifications
Weighed along with other elements – price, delivery
 - European manufacturers familiar with noise factors

International Noise Standards

- European Community Machinery Safety Directive
(89 / 392 / EEC & 91 / 368 / EEC)

“Machinery must be so designed and constructed that risks resulting from the emission of airborne noise are reduced to the lowest level taking account of technical progress and the availability of means of reducing noise, in particular at source.”

- Equipment must meet safety requirements and carry “CE” marking to be legally supplied
- Must indicate L_{Aeq} where it exceeds 70 dB(A) at workstation
- Must indicate emitted sound power, if SPL exceeds 85 dB(A)

International Noise Standards

- Workplace noise legislation throughout world generally 5dB stricter than in US. (Draft I-INCE Publication 94-1)
 - Most Europe limits L_{Aeq} 8-hour exposure to 85 dB with 3 dB exchange rate
 - US still has 90 dB limit with 5 dB exchange rate
- IEC published draft measurement standards for household electrical appliances.

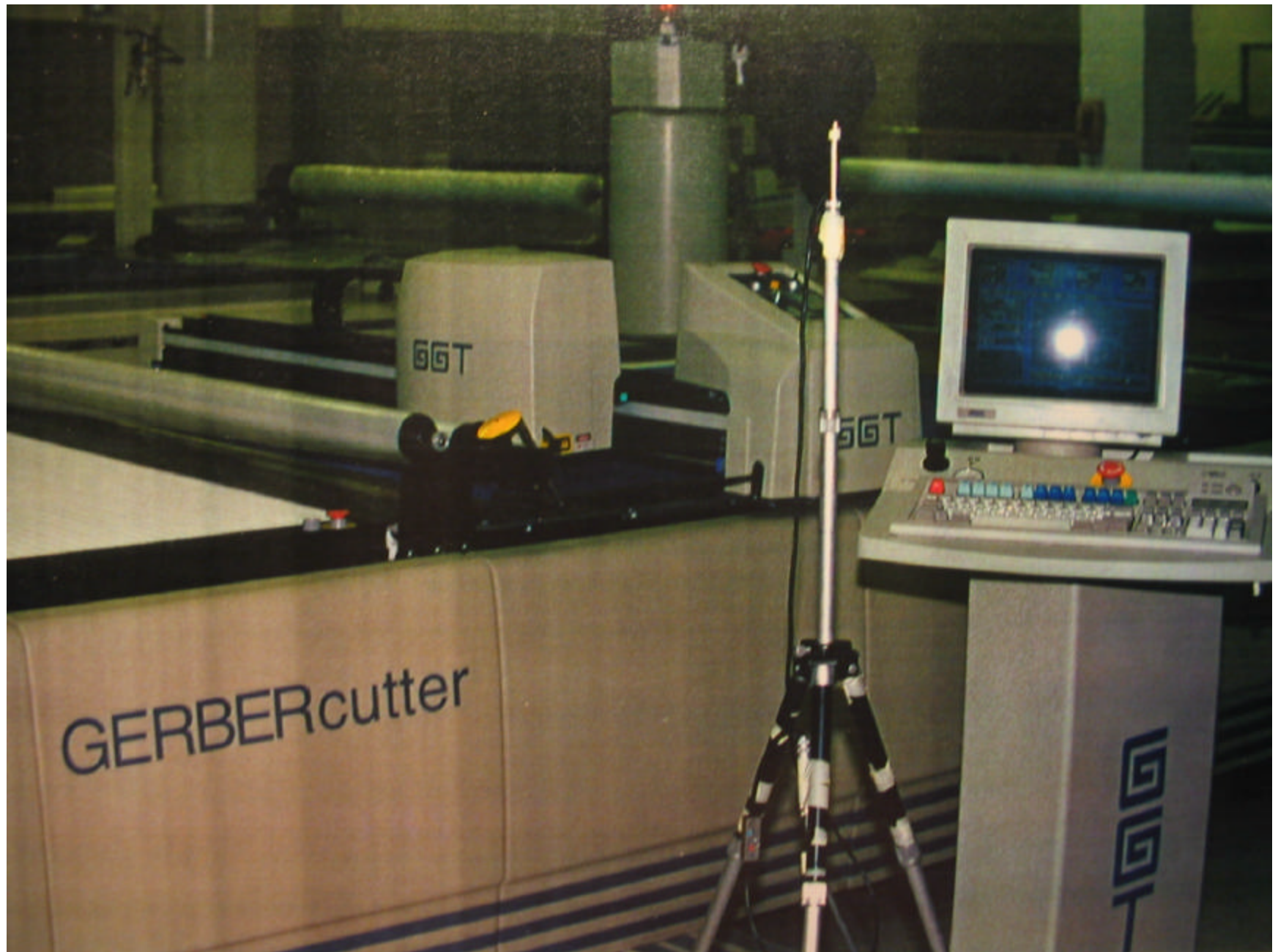
Competitive Example

Anatomy of a Corporate Decision

Manufacturer of cloth cutting machine for garment and auto Industries.

- Motivated by competitors (France & Spain) trade press advertisements claiming “75 dB” -- desire to match or beat
- Current models 85 to 90 dBA at operator stations
- Part way through design cycle of next generation model
- Sporadic customer complaints
- Customer worldwide (little regulation) – SE Asia, S America



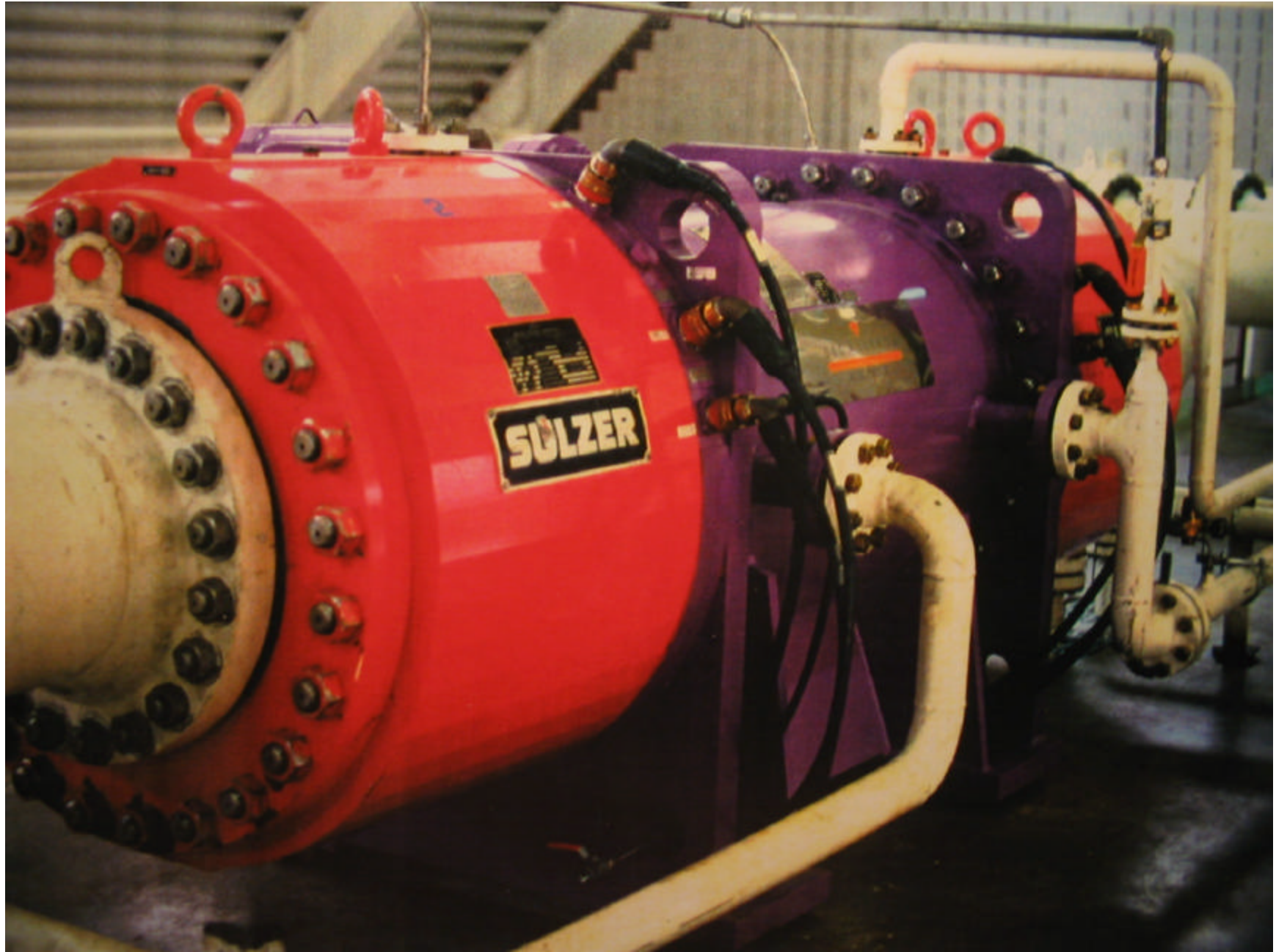


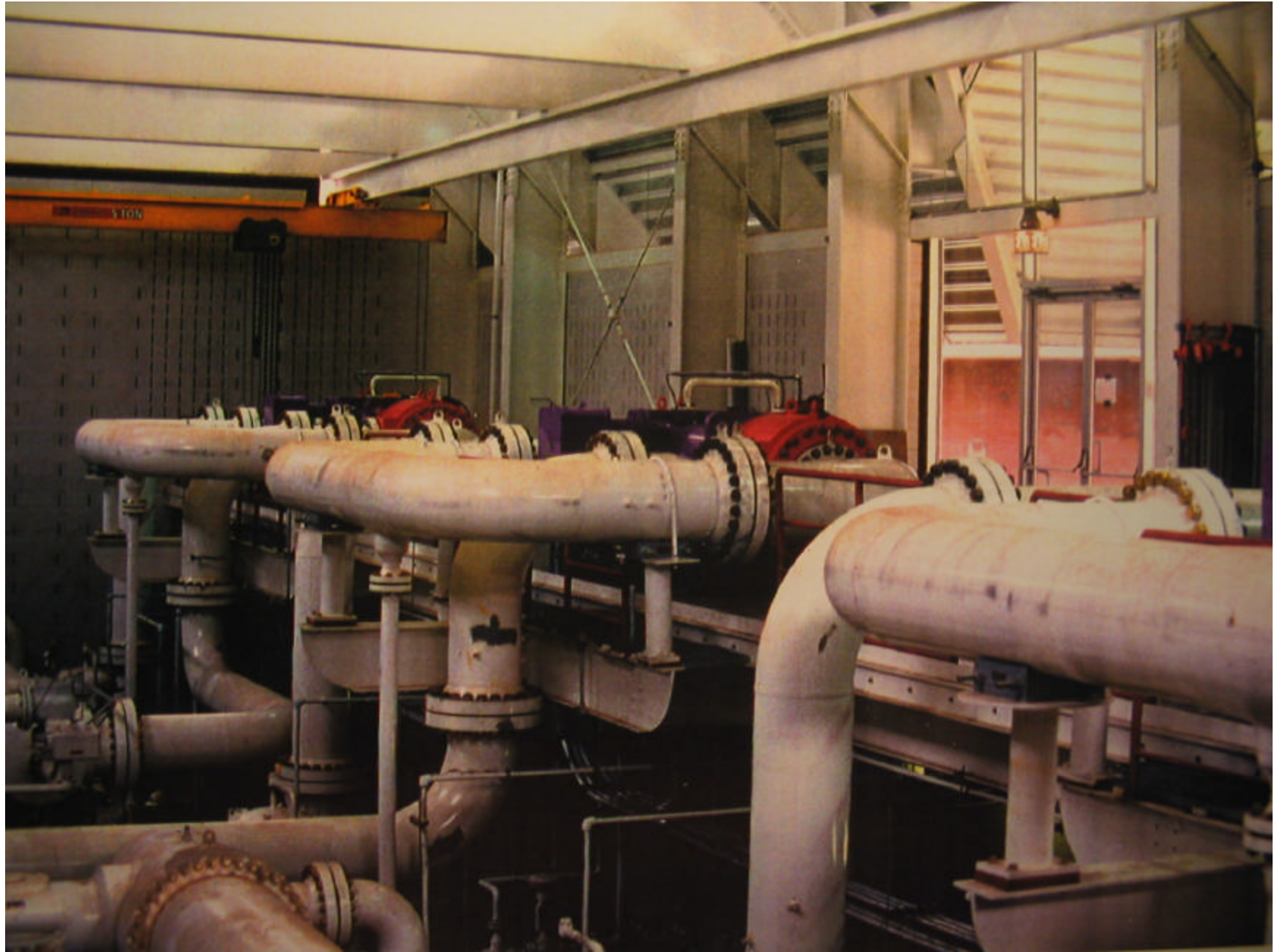
Competitive Example

Neighborhood Legal Action

Natural gas pipeline needs compressor station in posh area.

- Lawsuits block plans for years
- American firm offers turnkey low noise design / build using quiet European integral electric driven compressors
- Design better than regulatory requirements and *satisfies neighbors* -- permission to proceed
- Post-installation test a success -- meets strict requirements







Competitive Example

Active Noise Control in Flight

Swedish aircraft manufacturer teams with English electronics company to produce cabin noise control system.

- Saab 340 -- Ultra Electronics
- In commercial flight service
- No American builder currently offers a similar system

Competitive Example

Consumer Goods

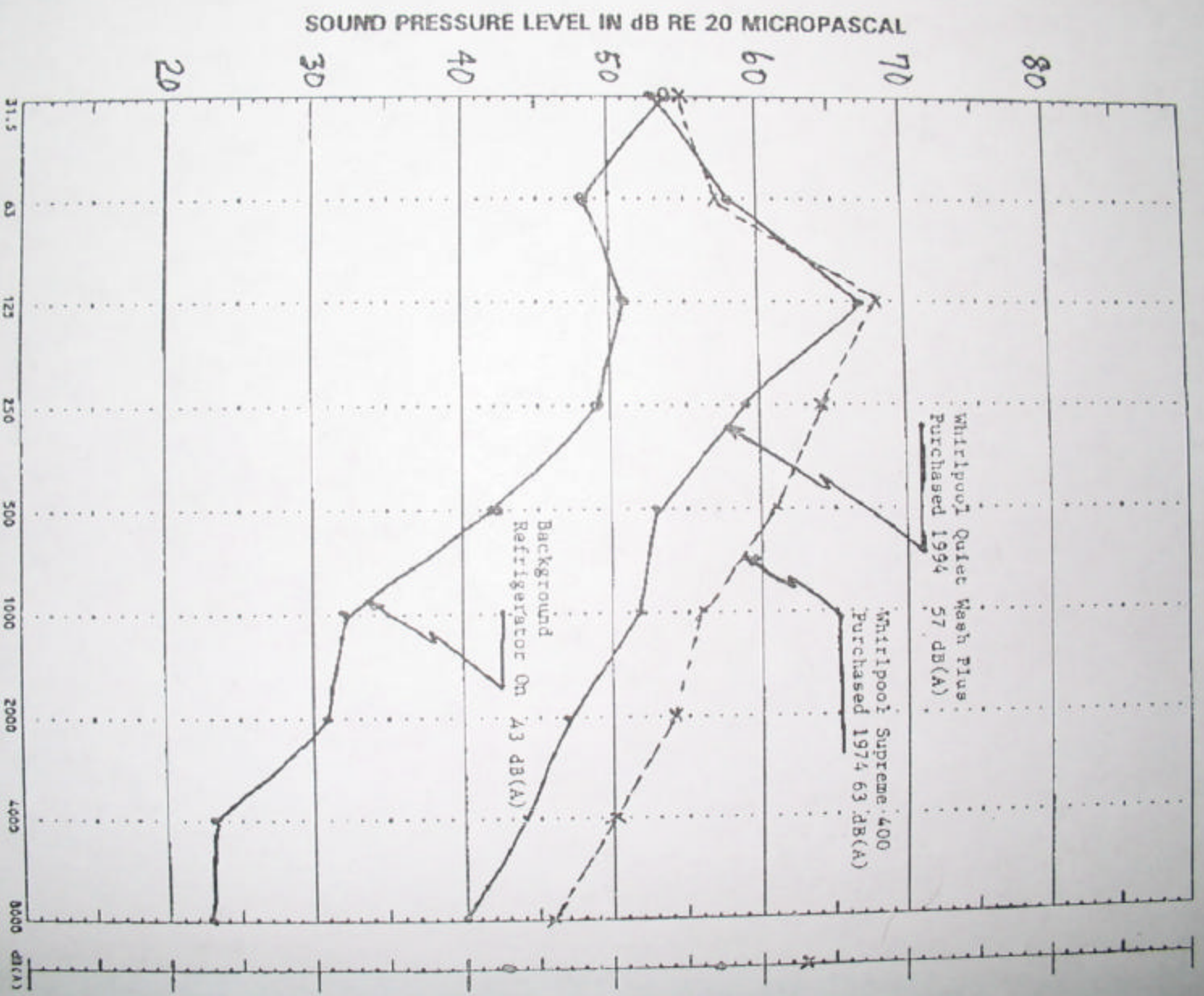
- Household appliances
- Lawn and garden equipment
- Hand and shop tools

Low noise is given as a strong selling point.

Is noise quantified ?







OCTAVE BAND CENTER FREQUENCIES IN Hz (cps)
Dishwasher Sound Pressure Levels in Wash Cycle at 3 Ft in Front

Lesson of Competitive Markets

The message is clear!

- Product sales are driven by customer needs and desires
- Low noise -- sometimes needed, almost always desirable
- Low noise -- opportunity for competitive advantage

Noise control marketplace -- A vision

- Global business demands that every advantage be taken
- Foreign regulations do not necessarily “legislate” low noise for the US market
 BUT the playing field is level for everyone
- Standards influence markets directly and indirectly
- To sell to industry in Europe must have “CE” marking
 Noise level -- another factor in purchasing equation
- European mfgs already geared up for low noise
 US lagging behind

Recommended Actions

Definitive role of ASA in disseminating information

Promote industry awareness of noise issues

- Contribute to industry publications
 - Design guides, articles, columns in trade press
- Encourage voluntary sound quality ratings by trades
- Develop and present talks to industry groups
- ASA special session on industrial noise concerns

Recommended Actions

Standards

- Insure industry representation for consensus standards
- Educate non-ASA professionals:
noise ratings, standards, legislation

Coordination

- Establish liaisons with:
 - manufacturing/industrial trade organizations
 - consumer organizations

Recommended Actions

Information Clearinghouse

A central repository of information useful to manufacturers

- Basic info on noise and its control
- Documentation on noise assessment, measurement, mitigation and management
- Database on costs and feasibility of engineering controls
- Database on noise ratings of “CE” products

Government Liaison

- New role for EPA -- partnership with industry

Conclusions

The global noise control marketplace is here!

***US industry must meet the challenge to survive
... and thrive.***

We all play a role -- you can sit by, or ...

make the effort and create success!