Tapped Holes Detector
“Electronic Eye” Patent

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Threaded Holes Manufacturing Challenge

Long Term Non Destructive Inspection / Test

- This electronic eye is capable to “See” electronically the tap left or molded in threaded holes
- Capable to “See” external threads
- Even in outer threaded surfaces

Customer Wishes

- Current manufacturers need to guarantee to their customers a 100% compliance to their specifications and regulations
- This “Electronic Eye” can be used in other applications like “Product Design, Test and performance”:

a) Product Quality Compliance

b) Real time inspection and Monitoring

c) Lab Contrast / Color analysis

Customer Needs

- This “Electronic Eye” will help customers to comply with product development phases and high precision applications as follows but not limited to others:
    a) Precision inspection
    b) Color analysis
    c) Control and Automation
    d) Light sensor
    e) Non-destructive tests

Cost Analysis

- The Financial advantage can be quantified in different “spheres” and “environments”
- Examples:
- a) No more destructive tests
- b) Extra - High speed sensing
- Signature analysis - Capability to connect to any electronic device or computer or high level controllers like Allen Bradley or as simple as to a cell phone wire/wireless.
- Competition? This electronic eye still under

Strengths and Advantages

- Customization Flexibility

a) Size b) Sensitivity c) Accuracy d) Price.

- Signature analysis - Capability to connect to any electronic device or computer or high level controllers like Allen Bradley or as simple as to a cell phone wire/wireless.
- Competition? This electronic eye still under patent protection as the main advantages
- Already prototypes/tested in the auto industry

Next Steps of Action

- Already piloted and tested successfully in the auto manufacturing industry, now it is a matter of advertising and not only apply it into the auto industry, now extend it to all the other industries rainbow.
- Marketing study

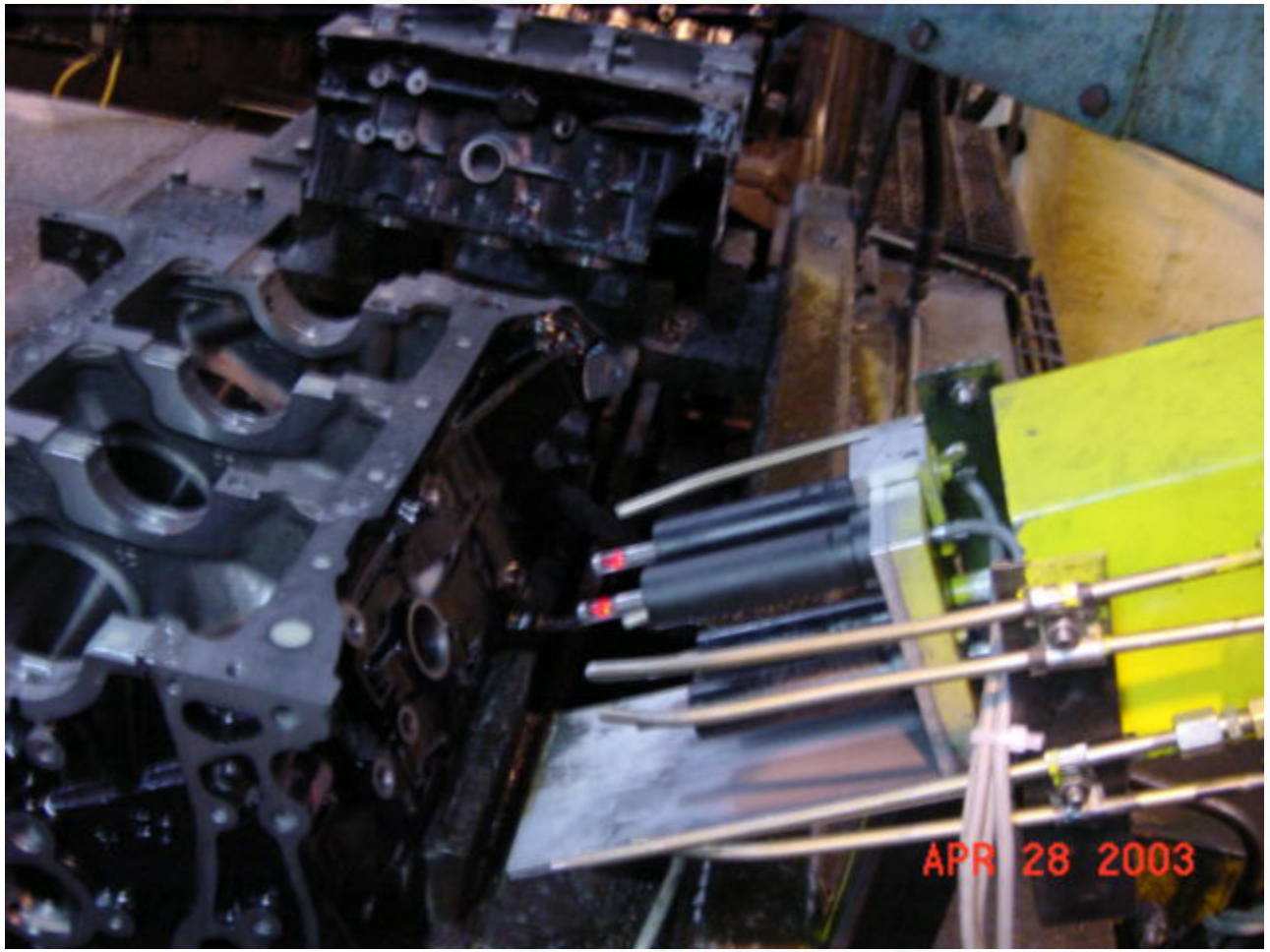
a) Select the industries

b) Sell and make profits satisfying customer wishes and needs

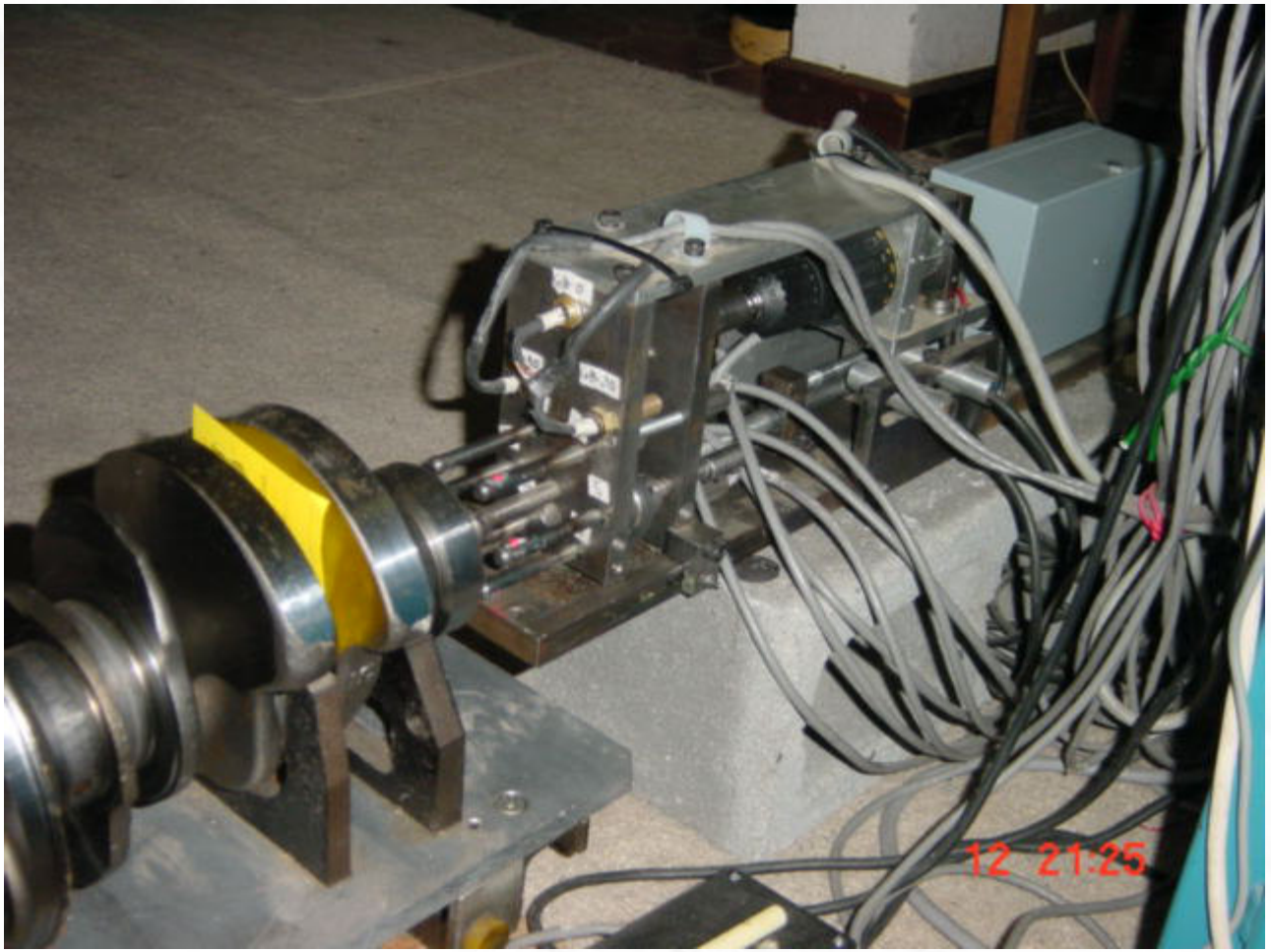
Auto Industry Applications General Motors Company

- Cylinder Block Air Compressor Threaded Holes Inspection – On-Line application – 18 seconds cycle time 6 cylinder fuel engine manufacturing facility (1650 engines/day).

Auto Industry Applications
General Motors Company



Auto Industry Applications - GM Tier 3 Companies: Crankshaft Thread Analysis



Google Search

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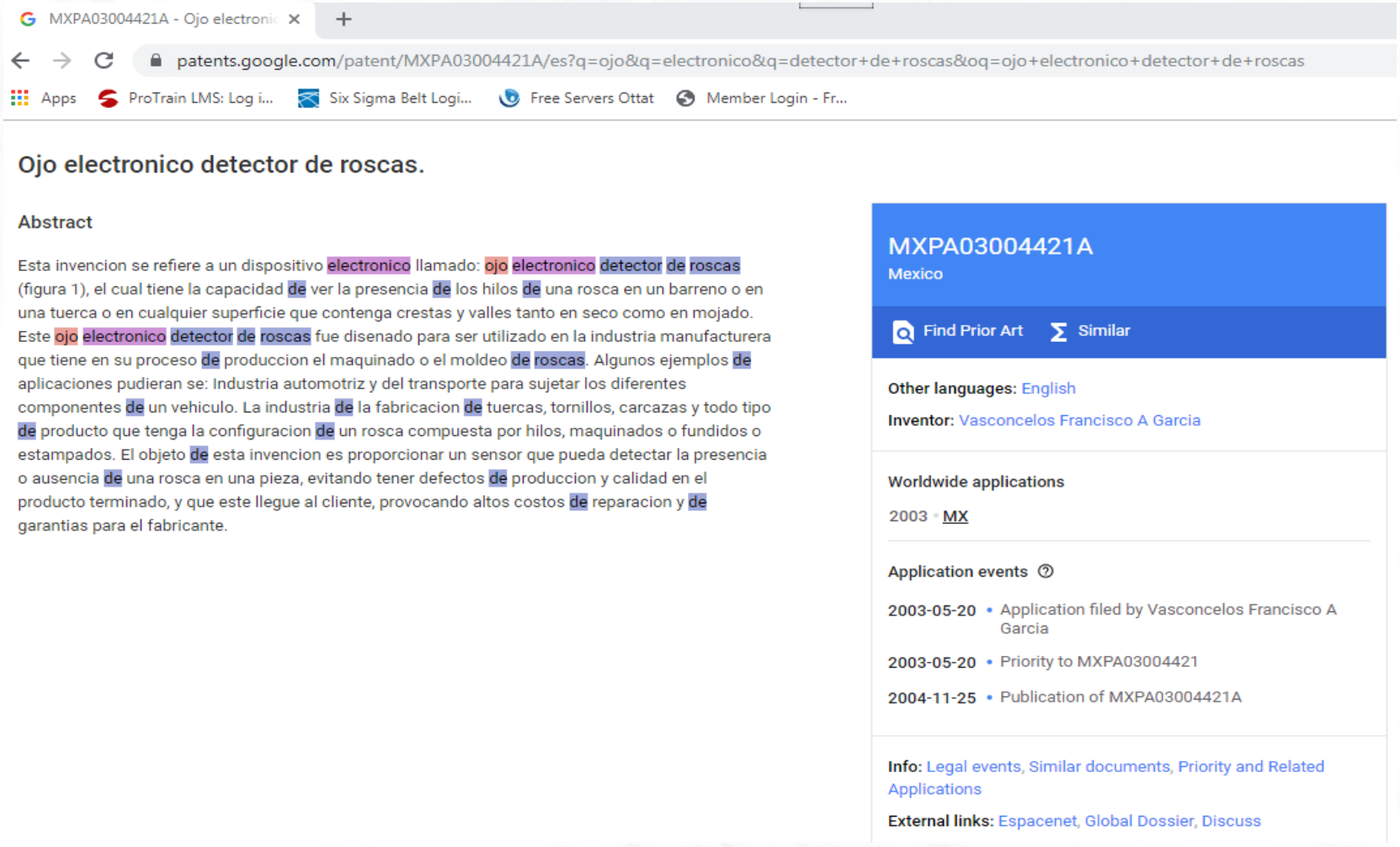
Google Link

Results



Google Link

Results – Abstract Section - Translation

- This invention refers to an electronic device named: Threaded holes Electronic Eye detector (figure 1), which has the capacity to see the presence of the tap threads in a hole or in a nut or in any surface that contains peaks and valleys under dry or wet conditions.
- This Threaded holes Electronic Eye detector was designed to be used in the manufacturing industry that has in the production process machining or molding taps and threads. Some examples of this applications could be: Automotive and transportation industry to fasten different components of a vehicle. The nut fabrication industry, bolts frames and all type of product that have the thread configurations compounded by threads, machined of foundry formed or stamped. The object of this invention is to provide a sensor capable to to detect the presence or absence of a tap in a piece,avoiding production and quality defects in the finished product, and that this arrives to the client, provoking high repair costs and warranty costs to the manufacturer.

Applications Web page

Website with some of the implemented applications in the manufacturing industry

www.ottat.com