

To: PumpTek Asia Limited (trademarks@choksilaw.com)
Subject: U.S. TRADEMARK APPLICATION NO. 85849487 - RECON - 1075.002
Sent: 11/13/2015 3:22:12 PM
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**UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)
OFFICE ACTION (OFFICIAL LETTER) ABOUT APPLICANT'S TRADEMARK APPLICATION**

U.S. APPLICATION SERIAL NO. 85849487

MARK: RECON

85849487

CORRESPONDENT ADDRESS:

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APPLICANT: PumpTek Asia Limited

CORRESPONDENT'S REFERENCE/DOCKET NO :

1075.002

CORRESPONDENT E-MAIL ADDRESS:

trademarks@choksilaw.com

OFFICE ACTION

ISSUE/MAILING DATE: 11/13/2015

THIS IS A SUBSEQUENT FINAL ACTION.

This Office action is in response to applicant's communication filed on October 21, 2015.

Registration was refused under Section 2(d) based on a likelihood of confusion with a mark in a prior registration. Applicant argued against the refusal and the arguments were carefully considered. However, they were ultimately deemed unpersuasive.

Further, the trademark examining attorney maintains and now makes FINAL the refusal(s) and/or requirement(s) in the summary of issues below. *See* 37 C.F.R. §2.63(b); TMEP §714.04.

SUMMARY OF ISSUES MADE FINAL that applicant must address:

- **Refusal under Section 2(d).**

Because applicant previously filed a Notice of Appeal, the application file will be forwarded to the Trademark Trial and Appeal Board for resumption of the appeal. When proceedings with respect to the appeal are resumed, the Board will take any further appropriate action with regard to any additional ground of refusal. *See* Trademark Trial and Appeal Board Manual of Procedure (TBMP) §1209.01.

Likelihood of Confusion

Registration of the applied-for mark is refused because of a likelihood of confusion with the mark in U.S. Registration No. 4390138. Trademark Act Section 2(d), 15 U.S.C. §1052(d); *see* TMEP §§1207.01 *et seq.* See the enclosed registration.

Trademark Act Section 2(d) bars registration of an applied-for mark that so resembles a registered mark that it is likely a potential consumer would be confused, mistaken, or deceived as to the source of the goods and/or services of the applicant and registrant. *See* 15 U.S.C. §1052(d). A determination of likelihood of confusion under Section 2(d) is made on a case-by case basis and the factors set forth in *In re E. I. du Pont de Nemours & Co.*, 476 F.2d 1357, 1361, 177 USPQ 563, 567 (C.C.P.A. 1973) aid in this determination. *Citigroup Inc. v. Capital City Bank Grp., Inc.*, 637 F.3d 1344, 1349, 98 USPQ2d 1253, 1256 (Fed. Cir. 2011) (citing *On-Line Careline, Inc. v. Am. Online, Inc.*, 229 F.3d 1080, 1085, 56 USPQ2d 1471, 1474 (Fed. Cir. 2000)). Not all the *du Pont* factors, however, are necessarily relevant or of equal weight, and any one of the factors may control in a given case, depending upon the evidence of record. *Citigroup Inc. v. Capital City Bank Grp., Inc.*, 637 F.3d at 1355, 98 USPQ2d at 1260; *In re Majestic Distilling Co.*, 315 F.3d 1311, 1315, 65 USPQ2d 1201, 1204 (Fed. Cir. 2003); *see In re E. I. du Pont de Nemours & Co.*, 476 F.2d at 1361-62, 177 USPQ at 567.

In this case, the following factors are the most relevant: similarity of the marks, similarity and nature of the goods and/or services, and similarity of the trade channels of the goods and/or services. *See In re Viterra Inc.*, 671 F.3d 1358, 1361-62, 101 USPQ2d 1905, 1908 (Fed. Cir. 2012); *In re Dakin's Miniatures Inc.*, 59 USPQ2d 1593, 1595-96 (TTAB 1999); TMEP §§1207.01 *et seq.*

Similarity of the Marks

In a likelihood of confusion determination, the marks in their entireties are compared for similarities in appearance, sound, connotation, and commercial impression. *In re E. I. du Pont de Nemours & Co.*, 476 F.2d 1357, 1361, 177 USPQ 563, 567 (C.C.P.A. 1973); TMEP §1207.01(b)-(b)(v).

In addition, for a composite mark containing both words and a design, the word portion may be more likely to be impressed upon a purchaser's memory and to be used when requesting the goods and/or services. *Joel Gott Wines, LLC v. Rehoboth Von Gott, Inc.*, 107 USPQ2d 1424, 1431 (TTAB 2013) (citing *In re Dakin's Miniatures, Inc.*, 59 USPQ2d 1593, 1596 (TTAB 1999)); TMEP §1207.01(c)(ii); *see In re Viterra Inc.*, 671 F.3d 1358, 1362, 101 USPQ2d 1905, 1908, 1911 (Fed. Cir. 2012) (citing *CBS Inc. v. Morrow*, 708 F.2d 1579, 1581-82, 218 USPQ 198, 200 (Fed. Cir. 1983)). Thus, although such marks must be compared in their entireties, the word portion is often considered the dominant feature and is accorded greater weight in determining whether marks are confusingly similar, even where the word portion has been disclaimed. *In re Viterra Inc.*, 671 F.3d at 1366, 101 USPQ2d at 1911 (Fed. Cir. 2012) (citing *Giant Food, Inc. v. Nation's Foodservice, Inc.*, 710 F.2d 1565, 1570-71, 218 USPQ2d 390, 395 (Fed. Cir. 1983)).

In the present case, consumers would use the wording in the marks to call for the relevant goods and/or services. Significantly, applicant's mark is "RECON," and registrant's mark is "RECON" and design. As a result of the shared wording, the marks sound and appear similar. Moreover, their overall commercial impressions are similar with each calling to mind "reconnaissance."

Therefore, the marks are confusingly similar.

The Goods and/or Services are Related

The goods and/or services of the parties need not be identical or even competitive to find a likelihood of confusion. See *On-line Careline Inc. v. Am. Online Inc.*, 229 F.3d 1080, 1086, 56 USPQ2d 1471, 1475 (Fed. Cir. 2000); *Recot, Inc. v. Becton*, 214 F.3d 1322, 1329, 54 USPQ2d 1894, 1898 (Fed. Cir. 2000) (“[E]ven if the goods in question are different from, and thus not related to, one another in kind, the same goods can be related in the mind of the consuming public as to the origin of the goods.”); TMEP §1207.01(a)(i).

The respective goods and/or services need only be “related in some manner and/or if the circumstances surrounding their marketing [be] such that they could give rise to the mistaken belief that [the goods and/or services] emanate from the same source.” *Coach Servs., Inc. v. Triumph Learning LLC*, 668 F.3d 1356, 1369, 101 USPQ2d 1713, 1722 (Fed. Cir. 2012) (quoting *7-Eleven Inc. v. Wechsler*, 83 USPQ2d 1715, 1724 (TTAB 2007)); TMEP §1207.01(a)(i).

In this case, registrant’s goods include surveying apparatus and instruments not for medical purposes, none for use in connection with internal combustion engines or internal combustion engine parts and components.

Applicant’s goods are oil and gas well downhole survey and measurement equipment, namely downhole sensors for use in monitoring well performance and conditions.

With respect to applicant’s and registrant’s goods and/or services, the question of likelihood of confusion is determined based on the description of the goods and/or services stated in the application and registration at issue, not on extrinsic evidence of actual use. See *Stone Lion Capital Partners, LP v. Lion Capital LLP*, 746 F.3d 1317, 1323, 110 USPQ2d 1157, 1162 (Fed. Cir. 2014) (quoting *Octocom Sys. Inc. v. Hous. Computers Servs. Inc.*, 918 F.2d 937, 942, 16 USPQ2d 1783, 1787 (Fed. Cir. 1990)).

Absent restrictions in an application and/or registration, the identified goods and/or services are “presumed to travel in the same channels of trade to the same class of purchasers.” *In re Viterra Inc.*, 671 F.3d 1358, 1362, 101 USPQ2d 1905, 1908 (Fed. Cir. 2012) (quoting *Hewlett-Packard Co. v. Packard Press, Inc.*, 281 F.3d 1261, 1268, 62 USPQ2d 1001, 1005 (Fed. Cir. 2002)). Additionally, unrestricted and broad identifications are presumed to encompass all goods and/or services of the type described. See *In re Jump Designs, LLC*, 80 USPQ2d 1370, 1374 (TTAB 2006) (citing *In re Elbaum*, 211 USPQ 639, 640 (TTAB 1981)); *In re Linkvest S.A.*, 24 USPQ2d 1716, 1716 (TTAB 1992).

In this case, the identification set forth in the registration is broad. Therefore, it is presumed that the goods travel in the same channels of trade and are available to the same class of purchasers. Further, the registration uses broad wording to describe the goods and this wording is presumed to encompass all goods of the type described, including those in applicant’s more narrow identification.

The attached Internet evidence also establishes that many entities provide a variety of surveying/measuring goods, especially in the drilling field. See, for example, the excerpts regarding the GE downhole sensors and the flow meters designed for survey work on natural gas pipelines. Therefore, applicant’s and registrant’s goods and/or services are considered related for likelihood of confusion purposes. See, e.g., *In re Davey Prods. Pty Ltd.*, 92 USPQ2d 1198, 1202-04 (TTAB 2009); *In re Toshiba Med. Sys. Corp.*, 91 USPQ2d 1266, 1268-69, 1271-72 (TTAB 2009).

Evidence obtained from the Internet may be used to support a determination under Section 2(d) that goods and/or services are related. See, e.g., *In re G.B.I. Tile & Stone, Inc.*, 92 USPQ2d 1366, 1371 (TTAB

2009); *In re Paper Doll Promotions, Inc.*, 84 USPQ2d 1660, 1668 (TTAB 2007). The Internet has become integral to daily life in the United States, with Census Bureau data showing approximately three-quarters of American households used the Internet in 2013 to engage in personal communications, to obtain news, information, and entertainment, and to do banking and shopping. See *In re Nieves & Nieves LLC*, 113 USPQ2d 1639, 1642 (TTAB 2015) (taking judicial notice of the following two official government publications: (1) Thom File & Camille Ryan, U.S. Census Bureau, Am. Cmty. Survey Reports ACS-28, *Computer & Internet Use in the United States: 2013* (2014), available at <http://www.census.gov/content/dam/Census/library/publications/2014/acs/acs-28.pdf>, and (2) The Nat'l Telecomms. & Info. Admin. & Econ. & Statistics Admin., *Exploring the Digital Nation: America's Emerging Online Experience* (2013), available at http://www.ntia.doc.gov/files/ntia/publications/exploring_the_digital_nation_-_americas_emerging_online_experience.pdf). Thus, the widespread use of the Internet in the United States suggests that Internet evidence may be probative of public perception in trademark examination.

Applicant's Argument

Applicant argues that there is no likelihood of confusion because the term "surveying" in the registration should be limited to the determination of distance of objects for purposes of establishing maps. Applicant argues that the registrant, by using the term "surveying" in describing the registrant's goods, has restricted or limited the nature and type of goods branded under the registrant's mark in light of the definition of the term "surveying"; thus the registrant's goods are unrelated to the applicant's goods.

The examining attorney appreciates applicant's argument, but respectfully disagrees. As noted above, unrestricted and broad identifications are presumed to encompass all goods and/or services of the type described. *In re Jump Designs, LLC*, 80 USPQ2d at 1374.

The attached definitions establish that "surveying" is a plural of "survey," both of which can refer to measuring or examination that is not land-map or map-related. Significantly, the Office's own *U.S. Acceptable Identification of Goods and Services Manual* at <http://tess2.uspto.gov/netathtml/tidm.html> contains sample acceptable identifications using "surveying" in a manner not related to land or maps. For example, "surveying of oil-bearing seams in Class 42" is an acceptable identification.

In this *ex parte* examination, the examining attorney must presume that registrant has all types of surveying apparatus and instruments not for medical purposes and not used in connection with internal combustion engines or internal combustion engine parts and components. Thus, it appears that registrant has goods that encompass applicant's goods.

Applicant also has provided extrinsic evidence about applicant's goods in attempt to show that the goods are distinguishable. However, this evidence *cannot be used to limit the scope of the goods in the registration*. As noted above, **the question of likelihood of confusion is determined based on the description of the goods and/or services stated in the application and registration at issue, not on extrinsic evidence of actual use.** *Stone Lion Capital Partners, LP*, 746 F.3d at 1323, 110 USPQ2d at 1162.

At the core of applicant's argument seems to be an objection that registrant's has identified its goods too broadly. To the extent that applicant is arguing that registrant is not really providing all types of surveying apparatus and instruments not for medical purposes and not used in connection with internal combustion engines or internal combustion engine parts and components, please note that a trademark or service mark

registration on the Principal Register is prima facie evidence of the validity of the registration and the registrant's exclusive right to use the mark in commerce in connection with the specified goods and/or services. *See* 15 U.S.C. §1057(b); TMEP §1207.01(d)(iv).

Thus, evidence and arguments that constitute a collateral attack on a cited registration, such as information or statements regarding a registrant's nonuse of its mark or partial nonuse of its mark in connection with the goods in the registration, are not relevant during ex parte prosecution. *See In re Dixie Rests.*, 105 F.3d 1405, 1408, 41 USPQ2d 1531, 1534-35 (Fed. Cir. 1997); *In re Peebles Inc.*, 23 USPQ2d 1795, 1797 n.5 (TTAB 1992); TMEP §1207.01(d)(iv). Such evidence and arguments may, however, be pertinent to a formal proceeding before the Trademark Trial and Appeal Board to cancel or partially cancel the cited registration.

Doubt is Resolved in Favor of Registrant

The overriding concern is not only to prevent buyer confusion as to the source of the goods and/or services, but to protect the registrant from adverse commercial impact due to use of a similar mark by a newcomer. *See In re Shell Oil Co.*, 992 F.2d 1204, 1208, 26 USPQ2d 1687, 1690 (Fed. Cir. 1993). Therefore, any doubt regarding a likelihood of confusion determination is resolved in favor of the registrant. TMEP §1207.01(d)(i); *see Hewlett-Packard Co. v. Packard Press, Inc.*, 281 F.3d 1261, 1265, 62 USPQ2d 1001, 1003 (Fed. Cir. 2002); *In re Hyper Shoppes (Ohio), Inc.*, 837 F.2d 463, 464-65, 6 USPQ2d 1025, 1026 (Fed. Cir. 1988).

In light of the foregoing, registration is refused under Trademark Act Section 2(d), 15 U.S.C. §1052(d).

**** The refusal(s) and/or requirement(s) above are now made FINAL.****

As noted above, the application file will now be forwarded to the Trademark Trial and Appeal Board for resumption of the appeal.

ADVISORY: TEAS PLUS OR TEAS REDUCED FEE (TEAS RF) APPLICANTS – TO MAINTAIN LOWER FEE, ADDITIONAL REQUIREMENTS MUST BE MET, INCLUDING SUBMITTING DOCUMENTS ONLINE: Applicants who filed their application online using the lower-fee TEAS Plus or TEAS RF application form must (1) file certain documents online using TEAS, including responses to Office actions (see TMEP §§819.02(b), 820.02(b) for a complete list of these documents); (2) maintain a valid e-mail correspondence address; and (3) agree to receive correspondence from the USPTO by e-mail throughout the prosecution of the application. *See* 37 C.F.R. §§2.22(b), 2.23(b); TMEP §§819, 820. TEAS Plus or TEAS RF applicants who do not meet these requirements must submit an additional processing fee of \$50 per international class of goods and/or services. 37 C.F.R. §§2.6(a)(1)(v), 2.22(c), 2.23(c); TMEP §§819.04, 820.04. However, in certain situations, TEAS Plus or TEAS RF applicants may respond to an Office action by authorizing an examiner's amendment by telephone without incurring this additional fee.

Please do not hesitate to contact the undersigned with any questions.

/MaureenDallLott/

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All informal e-mail communications relevant to this application will be placed in the official application record.

WHO MUST SIGN THE RESPONSE: It must be personally signed by an individual applicant or someone with legal authority to bind an applicant (i.e., a corporate officer, a general partner, all joint applicants). If an applicant is represented by an attorney, the attorney must sign the response.

PERIODICALLY CHECK THE STATUS OF THE APPLICATION: To ensure that applicant does not miss crucial deadlines or official notices, check the status of the application every three to four months using the Trademark Status and Document Retrieval (TSDR) system at <http://tsdr.uspto.gov/>. Please keep a copy of the TSDR status screen. If the status shows no change for more than six months, contact the Trademark Assistance Center by e-mail at TrademarkAssistanceCenter@uspto.gov or call 1-800-786-9199. For more information on checking status, see <http://www.uspto.gov/trademarks/process/status/>.

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DESIGN MARK

Serial Number

79121150

Status

REGISTERED

Word Mark

RECON

Standard Character Mark

No

Registration Number

4390138

Date Registered

2013/08/27

Type of Mark

TRADEMARK

Register

PRINCIPAL

Mark Drawing Code

(3) DESIGN PLUS WORDS, LETTERS AND/OR NUMBERS

Owner

FRIEM - S.P.A. JOINT STOCK COMPANY ITALY Via Borgogna, 5 MILANO ITALY

Goods/Services

Class Status -- ACTIVE. IC 009. US 021 023 026 036 038. G & S: Battery chargers; chargers for electric batteries; circuit breakers; electric apparatus for commutation; commutators; electric control panels; electric converters; current rectifiers; electrical distribution boards; electrical distribution boxes; electric installations for the remote control of industrial operations; high-frequency apparatus not for medical purposes, namely, power converters for renewable energy; inverters; electric regulating apparatus, namely, static voltage regulators and digital regulators for power converter; electric relays; remote control apparatus, namely, remote control for electrical automation and energy converters; surveying apparatus and instruments not for medical purposes; electric switchboxes; electrical switches; electric transformers; voltage surge protectors; none of the aforementioned goods for use in connection with internal combustion engines or internal combustion engine parts and components.

Priority Date

2012/05/28

Description of Mark

The mark consists of a sign depicting the wording "RECON" in fancy characters, the portion "RECON", of which the letters "R", "E", "C", of a larger size, enclosed in a substantially elliptic frame, the circumference of which tapers at the letters "R", "N", starting from the letter "C" of the portion "CON" there is a horizontal band extending towards the right, which underlines the portion "CON" and protrudes from the elliptic label.

Colors Claimed

Color is not claimed as a feature of the mark.

Filing Date

2012/08/02

Examining Attorney

LEWIS, SHAILA

Attorney of Record

Michelle P. Ciotola

RECon



DOWNLOADS

 SureDrill-DDM Technical Data Sheet (PDF)
Rev. 190313 v-6.05

NEWSROOM

23-Feb-15 » Drilling Dynamics Monitor (DDM™) Successfully Tested in Drilling Operation

Downhole Drilling Dynamics Monitor

SureDrill-DDM™

APS's Drilling Dynamics Monitor (DDM™) sub measures and records weight on bit, torque on bit, bending on bit, internal and annular pressure and temperature during drilling operations.



Drilling Dynamics Monitor (SureDrill-DDM)



FEATURES & BENEFITS

- Captured data may be transmitted in real time via APS's SureShot™ MWD/LWD system, or stored in the DDM's downhole memory for later download and analysis.
- Can be equipped with vibration monitoring to measure, calculate and record axial, lateral and angular downhole shock and vibration.
- Real-time vibration alarms may be transmitted via SureShot.

DESIGN

- Available sizes: 4.75 in. (121 mm), 6.75 in. (172 mm) and 8.0 in. (204 mm).

 [Download the SureDrill-DDM TDS to view detailed product specifications.](#)

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PRODUCTS

SureShot™ MWD Systems
SureLog™ LWD Systems
SureStream™ Drilling Systems
SureDrill™ Drilling Optimization & Vibration Products
Other Products

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Rev. 151828-v4.01
-  SureLog FWS-475 Technical Data Sheet (PDF)
Rev. 151822-v4.0
-  Triple & Quad Combo Advanced LWD Brochure (PDF)
Rev. 1504-v1

NEWSROOM

- 28-Sep-15 » APS Technology Announces the Addition of Azimuthal Gamma (AZG) LWD
- 04-May-15 » APS Technology Announces the Addition of Triple and Quad Combo LWD
- 01-Dec-14 » APS Releases Fully Digital 3.75 in. (95 mm) OD Wave Propagation Resistivity (WPR™) Sub

LWD Full-Wave Sonic Tool

SureLog-FWS™ – Enables “Quad Combo” LWD

APS's Full-Wave Sonic Tool is a formation slowness measurement tool designed for wireline-equivalent logging while drilling (LWD) and measurements after drilling (MAD) services. This full-waveform sonic device adds Δt (delta T) measurements to the “Triple Combo” LWD system, providing faster-than-fluid compressional wave (Δt_c) and shear wave (Δt_s) velocity data.



Full-wave Sonic Sub for “Quad Combo” LWD Services

APPLICATIONS

- > Wireline logging operations
- > Developing “insurance” formation evaluation logs during the drilling process
- > Borehole stability analysis and well completion design

Geophysicists can use Sonic sensor data to minimize uncertainty by tying time-based seismic data directly in with depth-based well log data. The rock's mechanical properties can also be calculated using APS Sonic and IPCD density data, for use in a borehole stability analysis and in the completion design of the well.

FEATURES & BENEFITS

- High-resolution data is stored in downhole memory for retrieval and processing during trips.
- Can be run in real-time MWD mode or standalone recorded data mode.
- Minimize uncertainty by tying time-based seismic data directly in with depth-based well log data.
- Full SureShot™ Control Center (SSCC™) and APSPlot™ support.
- Compatible with 3rd-party petrophysics and geophysics packages via DLIS, LAS, ASCII and WITS.

DESIGN

- Available sizes: 4.75 in. (121 mm), 6.75 in. (172 mm) and 8.0 in. (204 mm).
- Double-redundant (dual) 10 - 12 kHz transmitters.
- Six receivers located 6.0, 6.5, 7.0, 7.5, 8.0 and 8.5 ft from transmitters.
- Hatch cover for easy access via cable for tool programming and memory dump.

 [Download the SureLog-FWS TDS to view detailed product specifications.](#)

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About

The use of video in our day to day lives has changed massively over the last decade. From YouTube and video phones through to medical imaging, technology has changed the way we see things.

EV builds on these technology developments and applies them in the oil and gas industry with our downhole video and integrated sensors technology. Using our in-house research and engineering capabilities we design camera systems and integrate them with downhole sensors to work 10,000m below the surface in environments up to 175° C and 15,000 psi. Our specialist engineers run these downhole video cameras and integrated sensors in locations throughout the world, from the North Slope of Alaska to offshore New Zealand.

Our services are used for a wide variety of oilfield applications including mechanical inspection, well integrity, and production enhancement. The phrase, "A picture tells a thousand words," is as true in the wellbore as it is in the wider world, and EV is uniquely positioned to incorporate key measurements to those images.

We pride ourselves in our success in obtaining images, in some applications in combination with other logging tools, to help customers obtain clear answers in the toughest of environments. We do that with a success rate of over 95% thanks to both our technology and our expertise in advising oil and gas operators on how to clean-up their wellbore to get quality images.

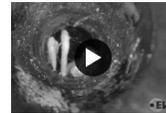
"A picture is worth a thousand words"



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Company

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WELL INTEGRITY >

PRODUCTION ENHANCEMENT >





Downhole Sensor

Downhole sensors manufactured by GE Oil & Gas capture real-time downhole data for a variety of artificial lift systems that can be used to extend product run-life, optimize control and increase production.

Downhole sensors sit below the motor at the base of the ESP and enable reliable and accurate retrieval of critical performance parameters. The data is then communicated to surface units where it can be viewed, saved or accessed remotely.

[Request a Quote](#)

Pricing available upon request

Features and Benefits

The features of the Downhole sensor include:

- Provide reliable real-time wellbore data
- The data is communicated to surface units where it can be viewed, saved or accessed remotely
- Operate in pressures up to 5,000 PSI
- Self-calibrate, improving reliability
- Come standard with corrosion-resistant stainless steel housing materials
- Enable on-site or remote monitoring
- Optimize ESP run-life by providing reliable and continuous performance diagnostics
- Ability to measure: pump intake and discharge pressure, intake fluid temperature, motor temperature, vibration in axial and longitudinal directions and current leakage

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- Optimize ESP run-life by providing reliable and continuous performance diagnostics
- Ability to measure: pump intake and discharge pressure, intake fluid temperature, motor temperature, vibration in axial and longitudinal directions and current leakage

News

GE Measurement & Control Opens World Class Silicon Clean Room in Groby, UK
New facility brings benefits from advanced silicon processing to global customers...

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TransPort PT878GC Portable Ultrasonic Gas Flow Meter

GE's TransPort PT878GC brings clamp-on ultrasonic gas flow metering capability to the portable level. Designed for short-term flow survey work for natural gas pipeline, compressed air, inert gas or any compressed gas applications, it has the ability to measure gas flow rates, log data to internal memory and export flow data to a PC. It is especially useful for metering of erosive, corrosive, toxic, high-purity or sterile gases or in any application where penetrating the pipe wall is undesirable.

TransPort PT878GC Portable Flow Meter

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Pricing available upon request

Features and Benefits

- Installation in 15 minutes
- No need for shutdowns or interrupting process as no tapping or cutting of pipe wall is required
- Noninvasive clamp-on transducers
- Temperatures up to 230 degrees C
- Velocity, volumetric, totalized actual and standard flow
- 3/4 to 24 inch pipe size capability
- Built-in datalogger for 100,000 measurements
- Built-in ultrasonic pipe-thickness gage (optional)

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Robust fiber optic pressure/temperature sensor for extreme temperature

KEY FEATURES

- ✓ High operating temperature (+300 °C)
- ✓ Excellent accuracy and long term stability
- ✓ High resistance in hydrogen rich environments
- ✓ High resistance in corrosive environments
- ✓ EMI/RFI immunity and intrinsically safe
- ✓ Robust packaging, low thermal sensitivity

REVOLUTIONARY

The OPP-W is a revolutionary fiber optic pressure and temperature sensor resulting from Opsens' advanced and market leading expertise in both fiber optic and pressure sensor technologies. The OPP-W, which is based on an optical sensing element made of monocrystalline sapphire, offers superior performances, robustness, durability, and hydrogen and corrosion resistance compared to conventional sensors.

The blending of Opsens WLPi signal conditioning technology with its all-sapphire optical sensing technology delivers long term accuracy, durability, low drift and high fidelity pressure and temperature measurements in the harshest applications such as high temperature & hydrogen rich downhole oil and gas, EMI, RFI, high voltage, combustible and explosive environments.

The OPP-W is a Fabry-Perot interferometer based, fiber optic pressure and temperature sensor constructed from highly durable and corrosion resistant sapphire material. Designed especially for demanding hazardous environments, it is encased in robust inconel-718 housing for applications requiring a rugged sensor. The OPP-W delivers in-situ and continuous monitoring of both downhole pressure and temperature.

APPLICATIONS

- > DOWNHOLE SENSING SOLUTIONS
- > CO2 STORAGE (RESERVOIR SURVEILLANCE)
- > DOWNHOLE MONITORING IN THERMAL EOR
- > INTELLIGENT AND SMART FIELD INSTRUMENTATION

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In-well Monitoring

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Characterising fluid movement within the well can be the key to understanding and optimising well performance. Silixa's intelligent Distributed Acoustic (IDAS™) and Distributed Temperature Sensors (ULTIMA™ DTS) offer a means to efficiently gather production or injection profiles along the entire wellbore with minimal or no intervention.

Distributed sensing utilises optical fibres within a steel walled cable which can be placed permanently in the well as part of a completion or temporarily during intervention. The optical fibre behaves as a sensor array making it possible to log the entire well path continuously without the need to move the cable and so providing information about dynamic flowing conditions in a way in which conventional sensors cannot.

Temperature data has been used in the evaluation of producing wells for many years and is still a core measurement for the production engineer however complementing temperature information with the unique attributes of true acoustic data gives the user a much more powerful decision support tool.

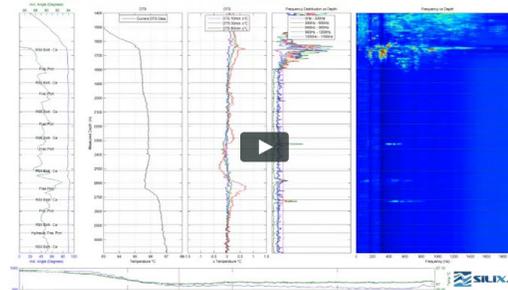
Downhole acoustic and temperature data can be used qualitatively to quickly identify which zones are actively producing (or taking fluid) or to determine the relative contribution of each zone using algorithms which harness temperature and the content of the acoustic signal.

Advanced acoustic processing, unique to Silixa, can be used to determine the speed of sound in the production fluid at different depths; this information indicates in-situ fluid type and can be used to resolve hold-up in two-phase flow. Additionally the Doppler shift between the speed of sound modes travelling up and down in the well make it possible to measure the fluid flow velocity and hence flow rates for a given tubing size.

Field software allows for real-time integrated visualisation of temperature and spectral acoustic data for quality control and initial evaluation while a post processing platform facilitates advanced data processing and versatile plotting options so that corroborative answers

Key Benefits

- Intervention-free production data acquisition
- Inherently reliable downhole sensor array
- Continuous depth and time monitoring better describes changing production patterns
- Production information without disturbing the flow path
- Supporting answers from multiple measurements improves decision confidence
- Production monitoring enables timely decisions on remediation
- Data acquisition on either singlemode or multimode optical fibre cable





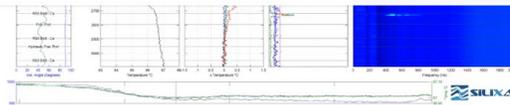
...between the speed of sound modes travelling up and down in the well make it possible to measure the fluid flow velocity and hence flow rates for a given tubing size.

Field software allows for real-time integrated visualisation of temperature and spectral acoustic data for quality control and initial evaluation while a post processing platform facilitates advanced data processing and versatile plotting options so that corroborating answers from independent measurements, IDAS™ and ULTIMA™ DTS, can be presented as actionable information to the user.

Downhole monitoring results can be further calibrated by the inclusion of an IDAS enabled flow meter installed on surface flow-lines.

The IDAS and ULTIMA DTS can be deployed periodically to gather discrete production profiles using existing optical fibre installations or by running a fibre optic cable in-well as a cable or coil tubing intervention. Alternatively the systems can be installed as part of a permanent monitoring solution providing continuous production information and conditional status alerts incorporated into a SCADA or similar system.

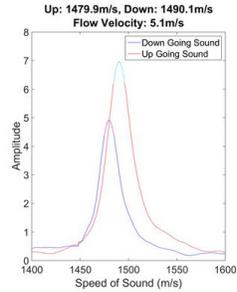
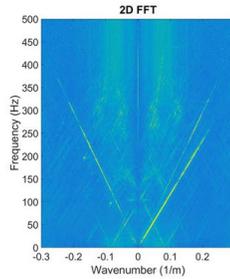
Silixa offers a range of fibre optic cables optimised for IDAS and DTS measurements along with permanent fibre optic cable installation equipment and procedures to ensure a safe, efficient and long lasting monitoring solution.

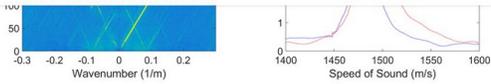


The animation above shows a composite presentation of silixa distributed temperature and acoustic data for the purpose of production profiling. Depth base distributed data is plotted alongside imported well information and is processed and presented according to a user selected time window; in this case each frame represents three minutes of data. In this example a basic data presentation has been used to identify regions of inflow using IDAS data to aid what would otherwise be a difficult interpretation of temperature data alone. Similar data presentations can include zonal contribution and fluid typing outputs based on IDAS and DTS processing methods offering high confidence corroborated answers.

Applications

- Identify active vs. inactive production zones
- Zonal production allocation
- Cross-flow identification
- Water or Gas entry detection
- Injection profiling
- Flow regime identification
- Production diagnostics





IDAS captures the true acoustic field (amplitude, frequency, and phase) at all points along the well. Silixa's advanced data processing techniques include conversion to the space-frequency domain (k-u) allowing individual speed of sound components to be identified, including those travelling within the well fluid both in an uphole and downhole direction (above left).

The speed of sound in a production or injection fluid contains valuable information about the fluid composition and also allows the flow velocity to be determined from the Doppler shift between up-going and down-going sound (above right).

The ability to extract this information from acoustic data along the entire instrumented well path signals a new era in well performance monitoring.

- Seismic
- Production Monitoring
- Well Integrity
- Fracture Monitoring
- CO₂ Well Monitoring
- Cable Mapping



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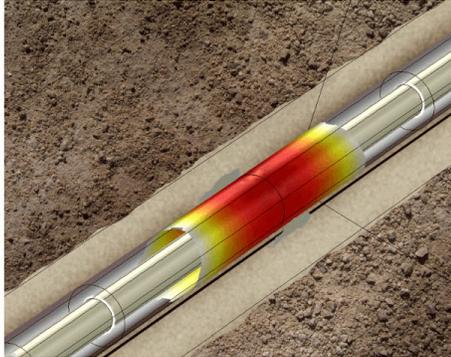
Leak Detection

Home / Pipeline Surveillance / Leak Detection

Temperature based leak detection is based on Silixa's **Distributed Temperature Sensor (ULTIMA™ DTS)** offering multiple channel configurations up to 35 km per channel on either single mode or multimode fibre.

Acoustic leak detection is based on the **Intelligent Distributed Acoustic Sensor (IDAS™)** with a range of tens of kilometres without using repeater stations. The system enables high quality synchronized coherent digital recording of acoustic waves, with no cross-talk, at every location along the fibre.

Optical fibre distributed acoustic and temperature based systems enable leak detection along the total length of the optical fibre cable under different operating conditions. Both technologies can be used in parallel or independently depending on the operational constraints of the pipeline. Distributed Temperature Sensor (DTS) based systems can be adapted to cases where large temperature gradient and slow or creeping leaks are expected whereas the Distributed Acoustic Sensor (DAS) system can be adopted in systems under high pressure where a fast response is expected.



Thermal leak detection works by detecting a localised change of temperature at a point along the pipeline induced by a release of the contents of the pipeline into the surrounding soil. For liquids, such as oil, this is usually a rise in temperature whereas for high pressure gases this is a drop due to the Joule-Thompson effect.

User interface

The Leak Detection System includes a management application to allow the user to set up:



Event ID	Event Type	Event Time
1001	Leak	2014-08-28 14:08:00
1002	Pressure Drop	2014-08-28 14:05:00
1003	Temperature Rise	2014-08-28 14:02:00
1004	Flow	2014-08-28 14:00:00



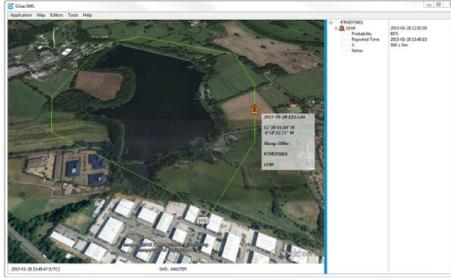
User interface

The Leak Detection System includes a management application to allow the user to set up:

- Discrete zones, as required
- Configure leak detection algorithms
- Assign detection algorithms
- Configure the measurement range
- Set up system alarms (system operation, fibre break)

Alarms are managed through the Surveillance management application with a graphical interface showing the schematic layout of the pipeline network on a customised screen. On receipt of a warning, a message will alert the operator, and a marker will indicate the type of event and highlight its location on the pipeline network map. The operator will be presented with further information in the alarm window that includes the time label and location. Every alarm will receive a unique alarm ID and all data associated with the alarm (including the signature data and operator notes) are stored locally on a database.

Tell us about your requirements



All the information, including GPS position, relating to a leak alarm is displayed on a clear user interface. In addition to displaying the alarms, the user can manage and record responses to the event through the screen.

- Leak detection
- Third Party Intrusion (TPI)



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Product Overview

The ExSensor™ technology was developed for long term real time downhole monitoring of pressure and temperature in high temperature wells (i.e. SAGD). We refer to this as **Extended Sensor** technology, as there are no active electronics downhole. The downhole sensor comprises of a RTD for the temperature measurement, and a proprietary silicon on insulator piezo-resistive pressure sensor. These sensors are contained in a fully welded pressure housing. A multi-conductor tube wire is used to connect the ExSensor with active electronics at surface. This connection utilizes proven metal to metal seal technology. The ExSensor is available in pressure ranges from 750 psi to 20,000 psi.

History

Spartek Systems developed the idea for this technology in mid 2006. Clients were requesting an alternative technology to vibrating wire pressure sensor, and the lack of long term success with current fiber optic sensor technology. In March of 2007 we began discussion with one of our key clients to commercialize this technology. Our first tools were ready for commercial field testing in mid 2007. The initial tools were targeted for SAGD wells with a maximum temperature of 200°C. The results of the initial field tests were positive, but the initial sensors used (high temperature silicon on silicon piezo-resistive pressure sensor), did have higher leakage currents at these temperatures. During this period we were being pushed to develop similar technology that would be viable for temperature in excess of 280°C. Working with one of our key vendors, we did develop a sensor that would work at temperatures up to 230°C. This is the silicon on insulator piezo-resistive sensor we are currently using. Long term testing of this sensor has shown excellent results at temperatures up to 200°C. However, above this temperature the MTTF decreases. At 230°C the expected life is only about 500 hours. These issues have been identified.

Today we offer the ExSensor for temperature up to 200°C. We are currently developing similar technology for temperatures up to 280°C, but this is still under development.

Features and Application

- SAGD pressure and temperature monitoring
- Utilizes industry proven proprietary piezo-resistive sensor technology
- No "active" electronics required downhole
- Pressure Ranges 750 psi to 20,000 psi.
- High Resolution, .005% of Full Scale
- High Accuracy, .03% of Full Scale
- Long Term Reliability

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- SPSRO Wireline Retrievable
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Product Overview

The SS8100 Well Head Pressure Recorders (WHDR) provide a cost effective solution for monitoring well pressures and temperature. The system can be configured to measure up to three independent pressure or temperature sensors. Each "smart stem" is independently calibrated from the main body. This allows the user to reconfigure the system as needed or use back up "smart stems" when calibrations are required. As with all of SparteK's products, our well head recorders have been designed with superior data quality, reliability, long term performance, and maintainability in mind.

The system utilizes an intelligent, primary lithium, non-restricted-for-transport battery pack. A lithium ion rechargeable battery pack and accompanying charger are also available. This power system provides the user with the necessary feedback to ensure that sufficient power is available for the duration of the survey. With memory capable of storing 2 million samples, when fully charged, this low power WHDR has the capability of acquiring data for over one year.

Primary Features

- Approved for Intrinsically Safe, Ex ia IIB T3
- Independently Calibrated "Smart Stems"
- Superior data quality / stability
- Wide operating temperature range
- Available in a several pressure ranges to optimize results (750 psi to 15,000 psi)
- Programmable sample rate (1 sample/sec max)
- 2 million sample memory capacity
- Low power consumption
- LCD character display(magnetic switch activation)
- Lightweight & compact in size makes for easy installation and handling
- High speed data transfer interface (USB 2.0)
- Field maintainable
- Windows OS: 8/7/Vista/NT/2000/XP

Certificates of Compliance

- SS8010A / SS8050 Well Head Pressure Recorder Certificate, Intrinsically Safe, Class I, Div 1, Groups A,B,C,D
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- Subsea Wellhead pressure and temperature sensors
- Remotely operated vehicles (ROVs)
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- Subsea electronics and control modules (SEM's and SCM's)
- Subsea umbilicals
- Wellhead feedthrough systems

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Subsea Oil Field Fly-Through



Subsea Oil Field Fly-Through



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Downhole Temperature Measurement

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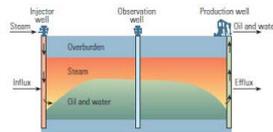
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Introduction

With ever increasing demands for information associated with reservoir management, major oil & gas companies are turning to fiber optic sensing technology for downhole temperature measurement. This relatively new technology can now be packaged for deployment into the harsh environments associated with oilfield production. The information captured by the DTS (Distributed Temperature Sensor) can be exported and analyzed in various ways to provide a better profile of the subsurface activities.

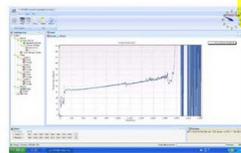


Application



Petroleum and production engineers use various methods of data gathering to make decisions related to reservoir management. One area seeing increased activity is in enhanced oil recovery. Fields that have been in service for years are being revitalized with CSS (Cyclic Steam Stimulation) methods to recover additional oil from these aging wells. During the implementation of these processes observation wells are used to monitor the progress and effectiveness of the steam across the formation. Monitoring temperature provides valuable data for the efficient use of energy and supports production decisions associated with steam usage.

Solution



The Yokogawa DTSX200 packaged within a robust solar powered RTU offers companies the ability to affordably monitor temperature in locations previously overlooked. The DTSX200 also has the ability to integrate into existing SCADA networks with Modbus TCP, WITSML, and IAS 2.0 while maintaining today's security requirements. Visualization and configuration of the DTS data can be achieved with the convenient and easy to use CV software offered with the interrogator. Exporting of data to remote databases also provide convenient view of the data by many team members.

Related Products & Solutions

DTSX200

DTSX200 is an easy-to-integrate optical fiber sensing system built on a process control platform.



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EXAxt PH450 4-Wire Analyzer for pH and ORP

The new EXAxt 450 series builds on the superior functionality of the industry leading Yokogawa EXA series by enhancing the EXA's proven operation and application flexibility. The Model 450 series feature a uniquely simple touch screen menu structure that offers a choice of multiple languages.

The Model PH450 provides the best pH measurement accuracy in the industry resulting from advanced temperature compensation functionality, preloaded calibration standards, stability checks and online sensor and analyzer diagnostics to provide verifiable results.

In addition to dynamic sensor checking, the Model 450 offers a wash cycle function to assure trouble free and accurate analysis with a minimum of maintenance. The EXAxt 450 also offers full application functionality with PID control on either mA output(s) or on contact output(s).

The PH450 combines pH with Temperature and ORP (Redox) measurement that can be utilized through different output functions: two mA outputs, four independent SPDT contact outputs and a digital HART signal is superimposed on mA1. This information can be used to generate additional current and contact outputs in the HIM monitor and in maintenance optimization programs like PRM or AMS.

The EXAxt 450 series provides a truly unique Human Machine Interface. The high resolution graphical display and touch screen operation provides all information clearly visible and easily accessible to the operator. Simply select the language of choice and on screen instructions assure that the best configuration for the application is obtained.

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- Unique touch screen operation with menu structure in 5 languages
- Dual High Impedance Capability, allowing for Differential pH/ORP measurements
- Enhanced diagnostics, process trending graphics and on-screen logbooks for data storage
- Two mA-outputs and four SPDT relay contacts with display indicators
- Hart® Communications
- FM Class 1, Div.2, Group ABCD, T6 for Ta-20 to 55°C
- IP66/NEMA4X 1/2 DIN enclosure for Field Mounting and Panel Mounting
- Three sets of preloaded pH buffer standards (NIST, US and DIN)

Home > Products and services > Artificial Lift Monitoring

Artificial Lift Monitoring

A reliable downhole condition monitoring system is of utmost importance for assessing well and artificial lift system performance. Our downhole equipment and well monitoring systems provide reliable measurements surrounding your ESP or other lift system giving you confidence in pushing that system to its optimum performance, enabling maximum production with the knowledge that the pump is running within its specified limits — optimum production and runlife can be successfully and confidently managed with a reliable well management system and downhole sensor equipment.

"Through enabling customer reserves to be produced in the most efficient and profitable manner, Zenith have rapidly become the independent world leader in downhole monitoring systems."

Greg Davis, Managing Director [in](#)

From low cost to multi-parameter and high pressure, high temperature condition monitoring systems, Zenith's easily installed and maintained gauges provide reliable, accurate data. Maintaining our exemplary survivability record is of primary importance, focussing on ensuring customers receive the best downhole equipment and well monitoring systems and service within the industry, advancing artificial lift technology to suit your specific requirements.



Gauges to increase knowledge from your wells

ESP Monitoring

Maximise the runlife of your electrical submersible pump (ESP) and optimise production while reducing costs;

- E-series for ESP
- E7+ Intelligent ESP Monitoring
- Ground Fault Immune ESP Gauge
- High Temperature for ESP

PCP Monitoring

Monitoring your PCP lifted well with a Zenith C-Series PCP Monitoring System will improve runlife and production;

- C-series for PCP
- PCP Protection System
- High Temperature for PCP

Gas Lift Monitoring

Data from a Zenith C-Series Gas Lift Monitoring System can lead to increased production and a decreased requirement for injected gas, improving efficiency;

- C-series for Gas Lift

Beam Pump Monitoring

Although typically low producing wells, data from a Zenith C-Series Beam Pump Monitoring System can assist production;

- C-series for Beam Pump

High Temperature Monitoring

High temperature (HT) and extreme temperature (XT) permanent monitoring systems deliver continuous data in high temperature environments and thermal stimulation, steam injection operations;

- HT High Temperature Monitoring
- XT Extreme Temperature Monitoring

ESP Bypass Systems - Y-Tools

Gaining access below the Electrical Submersible Pump (ESP) without the need for workover is becoming essential, the only way to achieve this is to install an ESP Bypass System (or Y-tool). As increasing reservoir performance targets are being introduced, knowing how your reservoir is performing with artificial lift becomes more and more crucial.

Bypass systems are mature technology and little had progressed in their design for almost 20 years. However, Zenith ESP Bypass systems have been re-engineered to overcome problems inherent in other manufacturers' systems.

An alternative regular bypass system can double the installation time of the ESP assembly, resulting in the rig being on location longer than required, as well as time-to-production delays.

Zenith downhole completions are designed to achieve simpler, safer installation of the system, rig time savings of more than 50% on average competitor ESP bypass installation times can be achieved.

Zenith ESP bypass completions unique system design also allows for thermal expansion of the ESP assembly preventing subsequent damage which may be detrimental to the continued operation of the ESP, maximising pump protection.



Bypass sub-assembly torqued and tested

Next Generation ESP Bypass System

Patented Saddle™ technology has halved regular bypass installation times and significantly reduced rig costs and delays.

[More information](#)

ZenWell Completion System

Fully integrated whole-system monitoring and protection completion surrounding your artificial lift system.

[More information](#)

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Dictionary

survey

verb | sur-vey | 'sar-'vā, 'sar-'

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- : to ask (many people) a question or a series of questions in order to gather information about what most people do or think about something
- : to look at and examine all parts of (something)
- : to measure and examine (an area of land)

10 funny-sounding words
to liven your vocabulary

sur-veyed sur-vey-ing

Full Definition of SURVEY

transitive verb

- a** : to examine as to condition, situation, or value : APPRAISE
- b** : to query (someone) in order to collect data for the analysis of some aspect of a group or area
- 2** : to determine and delineate the form, extent, and position of (as a tract of land) by taking linear and angular measurements and by applying the principles of geometry and trigonometry

Word of the Day NOVEMBER 13, 2015

bipartisan

of or relating to members of two parties

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they're There, There, and Their

there their

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3 : to view or consider comprehensively

4 : **INSPECT, SCRUTINIZE** <he surveyed us in a lordly way — Alan Harrington>

intransitive verb

: to make a survey

See [survey](#) defined for English-language learners

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Examples of SURVEY

- A total of 250 city residents were *surveyed* about the project.
- 64 percent of the people *surveyed* said that the economy was doing well.
- The teacher *surveyed* the room.
- People were *surveying* the damage after the storm.
- Engineers *surveyed* the property to see what could be built on it.

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Origion of SURVEY

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Trend Watch

Eminence Grise

Origin of SURVEY

Middle English, from Anglo-French *surveer*, to look over, from *sur-* + *veer* to see — more at [VIEW](#)
First Known Use: 15th century

Related to SURVEY

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survey

noun | *sur-vey* | \ˈsər-ˌvā, sər-ˈ\

- : an activity in which many people are asked a question or a series of questions in order to gather information about what most people do or think about something
- : an act of studying something in order to make a judgment about it
- : an act of measuring and examining an area of land

plural **surveys**

Full Definition of SURVEY

- 1** : the act or an instance of surveying: as
 - a** : a broad treatment of a subject
 - b** : [POLL 5a](#)
 - 2** : something that is surveyed
- See [survey](#) defined for English-language learners

Examples of SURVEY

The census found some surprising tendencies among the population.



Emmett Civil
George H.W. Bush is critical of his son's political advisers ...

The survey found some surprising tendencies among the population.
We conducted an opinion survey on the issue and found that most people agree.
a survey on American drinking habits
Surveys of each department were conducted earlier this year.
A survey of recent corporate layoffs reveals a new trend in business management.
A new land survey changed the borders of their property.

First Known Use of SURVEY

1548

Related to SURVEY

Synonyms
audit, check, checkup, examination, going-over, look-see, review, scan, scrutiny, inspection, view
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Other Cartography Terms

Robinson projection, benchmark, plat, projection, topography

SURVEY Defined for Kids

survey 

verb | sur-vey | 'sær-ˌvā

sur-veyed **sur-vey-ing**

Definition of SURVEY for Kids

- 1 : to look over : **EXAMINE** <The governor *surveyed* damage caused by the flood.>
- 2 : to find out the size, shape, or boundaries of (as a piece of land)
- 3 : to gather information from : ask questions of <We *surveyed* students to find out who was the most popular teacher.>

survey 

noun | sur-vey | 'sær-ˌvā

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plural **surveys**

Definition of SURVEY for Kids

- 1 : the action or an instance of gathering information or examining something
- 2 : something that is examined
- 3 : a history or description that covers a large subject briefly

Learn More About SURVEY

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Dictionary

Find definitions for:

sur·vey

Pronunciation: (

- v. sur-vā;
- n. sŭr'vā, sur-vā', [key]
- v. n., pl. -veys.

—v.t.

1. to take a general or comprehensive view of or appraise, as a situation, area of study, etc.
2. to view in detail, esp. to inspect, examine, or appraise formally or officially in order to ascertain condition, value, etc.
3. to conduct a survey of or among: *to survey TV viewers.*
4. to determine the exact form, boundaries, position, extent, etc., of (a tract of land, section of a country, etc.) by linear and angular measurements and the application of the principles of geometry and trigonometry.

—v.i.

to survey land; practice surveying.

—n.

1. an act or instance of surveying or of taking a comprehensive view of something: *The course is a survey of Italian painting.*
2. a formal or official **examination of the particulars of something** made in order to ascertain condition, character, etc.
3. a statement or description embodying the result of this: *They presented their survey to the board of directors.*
4. a sampling, or partial collection, of facts, figures, or opinions taken and used to approximate or indicate what a complete collection and analysis might reveal: *The survey showed the percentage of the population that planned to vote.*
5. the act of determining the exact form, boundaries, position, etc., as of a tract of land or section of a country, by linear measurements, angular measurements, etc.
6. the plan or description resulting from such an operation.
7. an agency for making determinations: *U.S. Geological Survey.*

survey.



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surveying
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Subject: U.S. TRADEMARK APPLICATION NO. 85849487 - RECON - 1075.002
Sent: 11/13/2015 3:22:13 PM
Sent As: ECOM105@USPTO.GOV
Attachments:

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