

To: SR Systems, LLC (docketingtm@hdp.com)

Subject: U.S. TRADEMARK APPLICATION NO. 85930193 - ANTI-TORSION - 16318-200017

Sent: 11/6/2015 9:10:21 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. 85930193

MARK: ANTI-TORSION

85930193

CORRESPONDENT ADDRESS:

GEOFFREY D AURINI
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5445 CORPORATE DR STE 200
TROY, MI 48098-2683

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APPLICANT: SR Systems, LLC

CORRESPONDENT'S REFERENCE/DOCKET NO :

16318-200017

CORRESPONDENT E-MAIL ADDRESS:

docketingtm@hdp.com

OFFICE ACTION

STRICT DEADLINE TO RESPOND TO THIS LETTER

TO AVOID ABANDONMENT OF APPLICANT'S TRADEMARK APPLICATION, THE USPTO MUST RECEIVE APPLICANT'S COMPLETE RESPONSE TO THIS LETTER **WITHIN 6 MONTHS** OF THE ISSUE/MAILING DATE BELOW.

ISSUE/MAILING DATE: 11/6/2015

THIS IS A FINAL ACTION.

This Office action is in response to applicant's communication filed on October 13, 2015.

The applicant argued against the Section 23(c) generic refusal. For the reasons set forth below, the refusal is now made **FINAL** under Trademark Act Section 23 because the proposed mark is generic and therefore unregistrable on the Supplemental Register. *See* 15 U.S.C. §1091; 37 C.F.R. §2.63(b).

Refusal Under Section 23(c) – Mark is a Generic Name for the Main Characteristic or Feature of the Goods

Registration is refused on the Supplemental Register because the applied-for mark is generic and thus incapable of distinguishing applicant's goods. Trademark Act Section 23(c), 15 U.S.C. §1091(c); *see* TMEP §§1209.01(c) *et seq.*

The applicant has applied to register ANTI-TORSION (Standard Characters) for “Metal building materials and hardware, namely, studs, beams, brackets, anchor bolts, threaded fasteners, bolts, nuts, nails, screws; metal wall panels.”

As explained in April 10, 2015 Office action, determining whether a mark is generic requires a two-step inquiry:

- (1) What is the genus of goods at issue?
 - (2) Does the relevant public understand the designation primarily to refer to that genus of goods?

H. Marvin Ginn Corp. v. Int'l Ass'n of Fire Chiefs, Inc., 782 F.2d at 989-90, 228 USPQ at 530; *In re Meridian Rack & Pinion*, 114 USPQ2d 1462, 1463 (TTAB 2015) (citing *In re 1800Mattress.com IP, LLC*, 586 F.3d 1359, 1363, 92 USPQ2d 1682, 1684 (Fed. Cir. 2009)); TMEP §1209.01(c)(i).

The name of an ingredient, a key aspect, a central focus or feature, or a main characteristic of goods may be generic for those goods. *See In re Cent. Sprinkler Co.*, 49 USPQ2d 1194, 1199 (TTAB 1998) (holding ATTIC generic for automatic sprinklers for fire protection used primarily in attics); TMEP §§1209.01(c) *et seq.*; *see also In re Northland Aluminum Prods. Inc.*, 777 F.2d 1556, 1559-60, 227 USPQ 961, 963-64 (Fed. Cir. 1985) (holding BUNDT generic for cake mix); *In re Ricci-Italian Silversmiths, Inc.*, 16 USPQ2d 1727, 1729-30 (TTAB 1990) (holding ART DECO generic for flatware); *In re Hask Toiletries, Inc.*, 223 USPQ 1254, 1255 (TTAB 1984) (holding HENNA 'N' PLACENTA generic for hair conditioner). Thus, a term does not need to be the name of a specific product to be found generic. In this case, the genus of goods at issue is components of anti-torsion building systems.

Regarding the second part of the inquiry, the relevant public is the purchasing or consuming public for the identified goods. *Frito-Lay N. Am., Inc. v. Princeton Vanguard, LLC*, 109 USPQ2d 1949, 1952 (TTAB 2014) (citing *Magic Wand Inc. v. RDB Inc.*, 940 F.2d at 640, 19 USPQ2d at 1553). In this case, the relevant public comprises ordinary consumers who purchase applicant's goods, because there are no restrictions or limitations to the channels of trade or classes of consumers.

Evidence of the public's understanding of a term can be obtained from any competent source, including dictionary definitions, research databases, newspapers, and other publications. *See In re Northland Aluminum Prods. Inc.*, *supra*; *In re Analog Devices Inc.*, 6 USPQ2d 1808 (TTAB 1988), *aff'd*, 871 F.2d 1097, 10 USPQ2d 1879 (Fed. Cir. 1989). Applicant's website and the websites of others are also proper sources of evidence as to the meaning of the proposed mark and the manner in which it is used in relation to the goods. *In re Reed Elsevier Prods. Inc.*, 482 F.3d 1376, 82 USPQ2d 1378 (Fed. Cir. 2007).

The dictionary definitions of “anti” and “torsion,” the excerpts from the applicant's website, and the copies of the applicant's patent applications, all of which were attached to prior Office actions, show that the term “anti-torsion” is generic in the context of the applicant's goods because the primary feature or characteristic of applicant's metal building materials is to counteract or neutralize the effects of torsion in

buildings caused by high winds such as those found with hurricanes and tornadoes. Further, the applicant's patent applications and website all use the term "anti-torsion" in a generic manner.

With respect to its use of the term "anti-torsion" in a generic manner, the applicant argues, "Applicant asserts it should not be held to forfeit its rights by virtue of limited misuses in a patent application and in marketing materials. It is in the process of considering and correcting its marketing imperfections. Misuse alone is simply insufficient to fully eradicate Applicant's rights."

While the applicant characterizes its generic use of the term "anti-torsion" as "limited," the evidence of record shows that it is frequent and consistent. All *three* of the applicant's patent applications that are of record use the term "anti-torsion" in a generic manner throughout the applications, including in the patent titles. The title of U.S. Patent Application 13/613,213 is "Structure **Anti-Torsion** System and Device, and Method of Use Providing Compression and Tension Support"; the title of U.S. Patent Application 13/613,365 is "Roof Member **Anti-Torsion** Bracket Device and Method of Use"; and the title of U.S. Patent Application 13/850,984 is "**Anti-Torsion** Construction System Providing Structural Integrity and Seismic Resistance" [emphasis added].

With respect to the effect its generic use of the term "anti-torsion" in its own patent applications could have on a determination of whether the term is generic, the applicant is referred to the Trademark Trial and Appeal Board's non-precedential decision in *In re Intercontinental Chemical Corp.*, U.S. Application Serial No. 75/168,541 (TTAB 2000).^[1] The decision can be found at the following link: <http://e-foia.uspto.gov/Foia/RetrievePdf?system=TTABIS&fINm=75168541-08-07-2000>. In that case, the Trademark Trial and Appeal Board found:

[T]hat the term "oscillator" is generic for the type of print screen cleaning machines produced by applicant. **The most telling pieces of evidence are applicant's patents wherein applicant itself identifies the product as "oscillator screen cleaning apparatus."** This evidence, coupled with the specific meaning of the term "oscillator" when applied to applicant's goods, convinces us that the term is unregistrable.

Id., at p.6 [emphasis added].

With respect to the dictionary evidence of record, which consists of definitions for the prefix "anti" and the word "torsion" but no dictionary definition for "anti-torsion," the applicant writes, "Not surprisingly, mainstream reference works such as Merriam-Webster Online do not have an entry for 'anti-torsion'." The fact that a word or term is not found in the dictionary is not controlling on the question of registrability when the word or term has a well understood and recognized meaning. *In re Orleans Wines, Ltd.*, 196 USPQ 516, 517 (TTAB 1977); TMEP §1209.03(b); see *In re Gould Paper Corp.*, 834 F.2d 1017, 1018, 5 USPQ2d 1110, 1111-12 (Fed. Cir. 1987); *In re Planalytics, Inc.*, 70 USPQ2d 1453, 1456 (TTAB 2004); *In re Tower Tech Inc.*, 64 USPQ2d 1314 (TTAB 2002).

Further, it is not at all unusual that mainstream dictionaries do not have a definition of the term "anti-torsion." When a common prefix like "anti" appears in a term, dictionaries typically contain a definition for the prefix and a separate definition for the base word to which the prefix is added. The possible combinations of "anti" formative words make it nearly impossible for dictionaries to define all of those combinations, the presumption being that people are smart enough to figure out the meaning of a word like "anti-torsion" from the two definitions.

The third-party website excerpts attached to this Office action and to the July 14, 2014 Office action show

that the term “anti-torsion” has a well understood and recognized meaning *and* is used generically in a wide variety of industries, including the construction industry, to describe products whose primary feature or characteristic is to counteract or neutralize the effects of torsion.

The applicant’s novel argument that “the Examiner’s new refusal to register ‘ANTI-TORSION’ on the Supplemental Register on Generic grounds amounts to an impermissible collateral attack” on applicant’s prior registration, U.S. Registration No. 4736846, is without merit. The undersigned examining attorney also was the examining attorney for U.S. Registration No. 4736846, so she has first-hand knowledge of the prosecution of that registration. U.S. Registration No. 4736846 is THE WORLD’S FIRST UNITIZED ANTI-TORSION SYSTEM (Standard Characters) for “Metal building materials and hardware, namely, studs, beams, brackets, anchor bolts, threaded fasteners, bolts, nuts, nails, screws; metal wall panels” and is registered on the Supplemental Register. THE WORLD’S FIRST UNITIZED ANTI-TORSION SYSTEM was initially refused registration under Trademark Act Section 2(e)(1) because the mark as a whole was laudatorily descriptive of the goods. In particular, the mark consists of the laudatory wording “THE WORLD’S FIRST” and the *descriptive* wording “UNITIZED ANTI-TORSION SYSTEM.” The wording “UNITIZED ANTI-TORSION SYSTEM” is unitary, and there was never any indication during the prosecution of that registration that the wording is generic. Thus, a disclaimer of the term “UNITIZED ANTI-TORSION SYSTEM” or any of the individual words like “ANTI-TORSION” or “ANTI-TORSION SYSTEM” would have been improper.

For the foregoing reasons, the refusal to register the mark on the Supplemental Register under Trademark Act Section 23(c) is maintained and made **FINAL**.

Options After a Final Refusal

Applicant must respond within six months of the date of issuance of this final Office action or the application will be abandoned. 15 U.S.C. §1062(b); 37 C.F.R. §2.65(a). Applicant may respond by providing one or both of the following:

- (1) A response that fully satisfies all outstanding requirements and/or resolves all outstanding refusals.
- (2) An appeal to the Trademark Trial and Appeal Board, with the appeal fee of \$100 per class.

37 C.F.R. §2.63(b)(1)-(2); TMEP §714.04; *see* 37 C.F.R. §2.6(a)(18); TBMP ch. 1200.

In certain rare circumstances, an applicant may respond by filing a petition to the Director pursuant to 37 C.F.R. §2.63(b)(2) to review procedural issues. TMEP §714.04; *see* 37 C.F.R. §2.146(b); TBMP §1201.05; TMEP §1704 (explaining petitionable matters). The petition fee is \$100. 37 C.F.R. §2.6(a)(15).

If the applicant has any questions concerning this final Office action, please call or email the assigned examining attorney.

/Barbara A. Gaynor/
Trademark Examining Attorney
Law Office 115

571-272-9164
Barbara.gaynor@uspto.gov

TO RESPOND TO THIS LETTER: Go to http://www.uspto.gov/trademarks/teas/response_forms.jsp. Please wait 48-72 hours from the issue/ mailing date before using the Trademark Electronic Application System (TEAS), to allow for necessary system updates of the application. For *technical* assistance with online forms, e-mail TEAS@uspto.gov. For questions about the Office action itself, please contact the assigned trademark examining attorney. **E-mail communications will not be accepted as responses to Office actions; therefore, do not respond to this Office action by e-mail.**

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/>.

TO UPDATE CORRESPONDENCE/E-MAIL ADDRESS: Use the TEAS form at <http://www.uspto.gov/trademarks/teas/correspondence.jsp>.

^[1] The Trademark Trial and Appeal Board has stated that decisions designated as not precedential are not binding upon the Board but may be cited for whatever persuasive value they might have. TBMP §101.03; TMEP §705.05.

You have reached the cached page for <http://www.radissondesign.com/p350.html>

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You searched for: **anti-torsion construction** We have highlighted matching words that appear in the page below.

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Radisson Design **Marina Builders**

by...Marine Systems International Inc. **Floating Dock Systems**

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 - > **A-150**
 - > **P-100**

P- 350

ALUMINUM DOCKS ON POSTS



P-360 DOCKS ARE AN EXCELLENT OPTION IN LOCATIONS WHERE WATER LEVELS FLUCTUATE AND IN AREAS THAT HAVE IRREGULAR

P-350

Deck Options

- Composite
- Hardwood

Floatation

- Radisson Floats
- Other Floats

Parts and Hardware

IRREGULAR AND SHALLOW SHORELINES.

THESE TYPES OF DOCKS ARE AN ECONOMICAL ALTERNATIVE TO FLOATING DOCKS, MAKING IT EASY TO GET OUT ONTO THE WATER WITHOUT SPENDING LARGE AMOUNTS OF MONEY.

Our P-350 docks can also be custom fitted with walkways to match irregular shorelines.

CONSTRUCTION Anti-Torsion Structure - 6061-T6 Aluminum

2" x 6" Decking (Other Decking Products Available)

Hot Dipped Galvanized Steel or Aluminum Posts

FASTENERS # 12 X 3" Stainless Steel Screws and 1/2" diameter Galvanized Bolts

FLOATATION N/A

FREEBOARD N/A

BUOYANCY N/A

OPTIONS AVAILABLE

reached the cached page for <http://www.boschrexroth.com/en/xc/products/product-groups/assembly-technology/basic-mechanic-elements/connection-technology/index>

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Products

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 - Profile Machining
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 - Connection Technology**

Connection Technology

The right connection element for every application – no problem for the modular profile system from Bosch Rexroth!

Inner brackets



The bracket for an elegant, cost-efficient, and easy-to-assembly solution

- Available for every Bosch Rexroth groove
- Recommended for constructing frames for doors, protective grilles, and partition walls
- End finishing not necessary
- Load carrying capacity of up to 3,000 N (depending on design and type of assembly)
- Detailed image
- Product details in the online catalog

Brackets



Attractive bracket for fast, exact, and **anti-torsion** assembly

- Uniform design from 20/20 to 100/100
- Load carrying capacity of up to 15,000 N (depending on design and type of assembly)
- Simple overhead assembly with twist-in fasteners & position recognition

Further information

- Product Documentation
- Online Catalogue and CAD files
- Planning Software MTpro



position recognition

Detailed image

Product details in the online catalog

Joints



The universal joint for up to 180°

- With 15° graduation for exact angle setting
 - Lock for quick connection and release, individually adjustable
 - Fast, **anti-torsion** assembly with centering lugs
- Detailed image
→ Product details in the online catalog

Cube connectors



Connector for **anti-torsion** corner connectors with 2 or 3 profiles and attractive appearance

- Suitable for doors or frames and enclosures
 - High rigidity
- Detailed image
→ Product details in the online catalog



Inexpensive bracket with caps in two designs: round & square

- **Anti-torsion** assembly
 - Self-forming screws: no finishing necessary
- Detailed image
→ Product details in the online catalog

T-connectors



The high-load connector

- Adjustable to profile groove
 - **Anti-torsion**
 - Smart: end connectors can be created using 2 T-connectors
 - 9,000 N displacement force
- Detailed image
→ Product details in the online catalog



- No end finishing
- Detailed image
- Product details in the online catalog



Attractive connector with cap and good screw accessibility

- Suitable for reinforcement of frames and stations due to high force absorption
- Detailed image
- Product details in the online catalog

Bolt connectors



Connector for extreme loads

- Suitable for heavy loads
- Forces are symmetrically distributed to the stable profile core via 2 screws
- Detailed image
- Product details in the online catalog

Quick connectors



construction

- Good accessibility for simple and fast assembly
- 3 grooves remain free to support surface elements
- Can slide in profile groove
- Detailed image
- Product details in the online catalog



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ANTI-TORSION CABLE

- Rigging
- Carbon Rigging
- Kevlar Rigging
- PBO Rigging
- Rod Rigging
- Anti-torsion Cables

ANTI-TORSION (AT) CABLE

The increasing requirement of furling headsails on numerous projects has led to the development of Navtec's Anti-Torsion (AT) Aramid or PBO cable. This cable's unique internal construction makes it the best choice for permanently installed furling Headsails. Navtec has worked closely with furler suppliers to provide the most torsion-resistant cable assembly available today. Navtec terminations can be easily fitted directly to existing furling units. We have also worked to supply direct connections between the biconic socket and furler, resulting in the cleanest, lightest connection available. Navtec can custom design Anti-Torsion cable end fittings that are compatible with roller furlers from most manufacturers.





AT BICONIC



AT-HPAT



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- RHEYCORD®-OFE M Cable
- BUFLEX® DGR Cable
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- RHEYCORD®(RTS) (N)SHTOEU-J Cable
- RHEYCORD®-PUR R Cable
- Buflex® SC Cable
- Buflex® SEM Cable
- Buflex® SEM OFE Cable
- Buflex X Prem Cable
- RHEYFIRM®(RTS) (N) TSCGEWTOEUS Cable
- RHEYFIRM®(RTS) (N) TSCGEWTOEUS OFE
- RHEYFIRM®(RS)-FLAT (N) TSLCGCWOEUS Cable
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You are here: Home / Nexans Cables / Anti Torsion Braid

Anti Torsion Braid

In most flexible handling cables, we use an anti-torsion braid. The anti-torsion braid consist of synthetic threads with a very high tensile strength. It is embedded between inner and outer sheath to prevent twisting, loops, push off the outer sheath and "corkscrew-effects".

Torsional stresses is caused by different conditions:

- Changes of direction into different planes
- Non aligned guide pulley
- Sloping cable guide into the deflection pulley
- High dynamic stress
- High tensile load of the cable

Criteria to build up a heavy duty reinforcement:

- A good chemical bonding between synthetic threads and sheath compound
- Braid angle
- Braid coverage percentage
- Material of reinforcement
- Shear resistance of the reinforcement element



Anti-torsion braid in a RHEYFIRM®(RTS)



Cork screw-effect

- RHEYFLEX®-PN Cable
- RHEYCORD®(BS) YSLZ3S0E-J
- RHEYFIRM®(SI)
- NTMCGW0EUS Cable
- Nexans Conductors
- Nexans Handling Cable Compounds
- Nexans Strength Member
- Anti Torsion Braid**
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We are able to cut the majority of the cables on this site to length in our warehouse.

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We stock and supply an extensive range of cable accessories including cable glands and cable connectors. Also available to [buy on-line](#).

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We ship locally using our van, nationally using a UK courier network and globally using our freight forwarders.

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CSE Cables Ltd : Unit 13, Wooburn Industrial Park, Wooburn Green, Bucks, HP10 0PE
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PRODUCT CATEGORIES

59 - Mast steps > Mast steps > Anti-torsion ladder for mast climbing

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- Electronics and navigation 10
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- Maintenance 10
- Equipment and onboard 10

Anti-torsion ladder for mast climbing

NEW

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Made of webbing tape and aluminium steps. The ladder has to be fixed at the mast base with the fixings supplied (ideally fixed under the boom goose neck fitting) and has then to be put under tension by means of a halyard winch. The ladder will be stiff and stable: even if you lose your balance, the ladder keeps still and doesn't twist.

	Code	NewArticolo	Length m
	59.807.04		10
	59.807.05		12
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Equipment and onboard comfort

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OCEANAIR

Whale
WATER SYSTEMS SPECIALIST



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Flexible Ducting Range

Hydraulic Hose Range

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ANTI TORSION WATER DELIVERY HOSE



1/2" I.D. ANTI-TORSION WATER DELIVERY HOSE

Price: £1.45 (€1.74 including VAT at 20%)

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I.D.		O.D.		W.P.		Max continuous	Weight	Price
(ins)	(mm)	(ins)	(mm)	(psi)	(bar)	Length (m)	per	per
1/2	12.5	-	17.5	175	12	100	0.16 kg	(metre)



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(ins)	(mm)	(ins)	(mm)	(psi)	(bar)	Length (m)	per	per
5/8	15	-	20.5	175	12	100	0.19 kg	(metre)



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Ref: ATH-20

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(ins)	(mm)	(ins)	(mm)	(psi)	(bar)	Length (m)	per	per
3/4	19	-	25.5	175	12	100	0.27 kg	(metre)



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Ref: ATH-25

Quantity:

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I.D.		O.D.		W.P.		Max continuous	Weight	Price
(ins)	(mm)	(ins)	(mm)	(psi)	(bar)	Length (m)	per	per
1	25	-	32.5	120	8	100	0.42 kg	(metre)



1.1/4" I.D. ANTI TORSION DELIVERY WATER HOSE

Price: £5.12 (€6.14 Including VAT at 20%)

Ref: ATH-32

Quantity:

Add To Basket

I.D.		O.D.		W.P.		Max continuous	Weight	Price
(ins)	(mm)	(ins)	(mm)	(psi)	(bar)	Length (m)	per	per
1.1/4	32	-	42	120	8	50	0.72 kg	(metre)



1.1/2" I.D. ANTI TORSION WATER DELIVERY HOSE



1.1/2" I.D. ANTI TORSION WATER DELIVERY HOSE

Price: £5.64 (€6.77 including VAT at 20%)

Ref: ATH-38

Quantity:

Add To Basket

I.D.		O.D.		W.P.		Max continuous	Weight	Price
(ins)	(mm)	(ins)	(mm)	(psi)	(bar)	Length (m)	per	per
1.1/2	38	-	48	120	8	20	0.92 kg	(metre)



2" I.D. ANTI TORSION WATER DELIVERY HOSE

Price: £9.03 (€10.84 including VAT at 20%)

Ref: ATH-50

Quantity:

Add To Basket

I.D.		O.D.		W.P.		Max continuous	Weight	Price
(ins)	(mm)	(ins)	(mm)	(psi)	(bar)	Length (m)	per	per
2	50	-	63	120	8	50	1.40 kg	(metre)

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Home > Advanced Materials Research > Advanced Research on Industry, Information System... > The Simulation and Test of Anti-Torsion Frame for...

Paper Title: The Simulation and Test of Anti-Torsion Frame for Off-Road Vehicle

Abstract

This paper studied the calculation and design of anti-torsion vehicle frame to reduce the torque transmission via the frame and advance the reliability of off-road vehicle's loading equipment. Two kinds of projects are designed and analyzed by the tools of FEA on the extreme condition, then tested the prototypes of the two projects to compare the distributing of the load equipment's stress and analyzed the road reliability of the whole system to validate the feasibility of the projects. The test data indicates that the average principal stress decreased to 43.6% ~49.2% after equipped flexible vehicle frame. This paper gives a helpful trial for decreasing the stress transmission from the ground to the vehicles on the off-road terrains and improving the reliability of the special's load equipment.

Info

Periodical	Advanced Materials Research (Volumes 204-210)
Main Theme	Advanced Research on Industry, Information System and Material Engineering, IISME2011
Edited by	Helen Zhang, Gang Shen and David Jin
Pages	2079-2082



or Cognitive Maps: The Case of a Chinese Steel Company's Strategic Decision Making p.2098

Pages 2079-2082

DOI 10.4028/www.scientific.net/AMR.204-210.2079

Citation J. T. Yue, P. Dou, X. Y. Li, "The Simulation and Test of Anti-Torsion Frame for Off-Road Vehicle", *Advanced Materials Research*, Vols. 204-210, pp. 2079-2082, Feb. 2011

Online since February 2011

Authors Jing Tao Yue, Peng Dou, Xin Yao Li

Keywords Vehicle Frame Anti-Torsion Calculation Test

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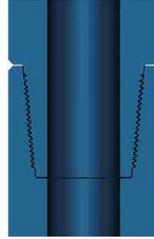
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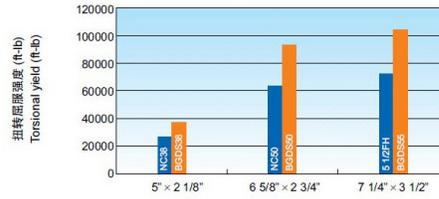
BBGDS High Anti-Torsion Connector

BBGDS is a high anti-torsion drill pipe connection, incorporating a double-shoulder design and fully interchangeable with API connection. The anti-torsion strength of BBGDS connection is approximately 30% higher than API connection. It is mainly used for drilling and development of wells with difficult conditions, such as directional wells, horizontal wells, and deep and ultra-deep wells.



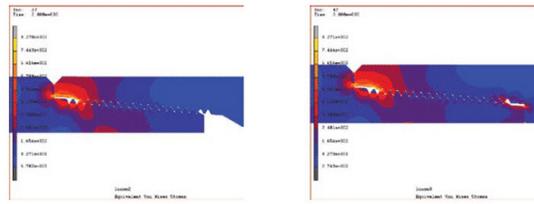
- High torque resistance compared to API
- Same handling speed as API
- Less pressure drop for same torque capacity than API
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- Flush ID connector

Torsional yield strength BBGDS vs API tool joint



工具接头尺寸(in)
Tool joint dimension (in)

Finite Element Analysis (FEA)



Torsional strength, tensile strength and make-up torque

BGD526

内径 ID	数据 Data	外径 OD			
		3 3/4	3 5/8	3 1/2	3 3/8
1 1/2	扭转强度(T-b) Torque (ft-lb)	12570	12490	12300 B	10330 B
	拉伸强度(lb) Tension (lb)	390300	390300	390300	390300
	上扣扭矩(T-b) Make-up (ft-lb)	7600	7500	7400	6200
1 9/16	扭转强度(T-b) Torque (ft-lb)	11820	11740	11670	10010 B
	拉伸强度(lb) Tension (lb)	372200	372200	372200	372200
	上扣扭矩(T-b) Make-up (ft-lb)	7100	7000	7000	6000
1 5/8	扭转强度(T-b) Torque (ft-lb)	11030	10960	10890	9670 B
	拉伸强度(lb) Tension (lb)	353400	353400	353400	353400
	上扣扭矩(T-b) Make-up (ft-lb)	6600	6600	6500	5800

Make-up (ft-lb)					
1 3/4	扭轉強度(Torque (ft-lb))	9350	9280	9220	8940 B
	拉伸強度(Tension (lb))	313700	313700	313700	313700
	上拉扭轉(Make-up (ft-lb))	5600	5600	5500	5400

注：表中接頭強度數據是根據API標準120鋼級計算的。如果選用110鋼級接頭，需將表中數據乘以0.917的系數。如果選用135鋼級接頭，需將表中數據乘以1.125的系數。

Remarks: Joint strength data in the table above is calculated according to steel grade 120 of API standard. If joint with steel grade 110 is applied, the data should multiply a coefficient of 0.917. If joint with steel grade 135 is applied, the data in the table should multiply a coefficient of 1.125.

BGD555

內徑 ID	數據 Data	外徑/OD			
		7 1/4	7 1/8	7	6 7/8
3	扭轉強度(Torque (ft-lb))	120290 B	112280 B	104480 B	96870 B
	拉伸強度(Tension (lb))	1925500	1925500	1925500	1925500
	上拉扭轉(Make-up (ft-lb))	72170	67400	62700	58100
3 1/4	扭轉強度(Torque (ft-lb))	115390 B	107380 B	99580 B	91970 B
	拉伸強度(Tension (lb))	1778300	1778300	1778300	1778300
	上拉扭轉(Make-up (ft-lb))	69200	64400	59800	55200
3 1/2	扭轉強度(Torque (ft-lb))	103700	101920 B	94120 B	86520 B
	拉伸強度(Tension (lb))	1619200	1619200	1619200	1619200
	上拉扭轉(Make-up (ft-lb))	62200	61200	56500	51900
3 3/4	扭轉強度(Torque (ft-lb))	89920	89620	88090 B	80490 B
	拉伸強度(Tension (lb))	1448400	1448400	1448400	1448400
	上拉扭轉(Make-up (ft-lb))	54000	53800	52900	48300
4	扭轉強度(Torque (ft-lb))	75020	74760	74500	73870 B
	拉伸強度(Tension (lb))	1265800	1265800	1265800	1265800
	上拉扭轉(Make-up (ft-lb))	45000	44900	44700	44300

注：表中接頭強度數據是根據API標準120鋼級計算的。如果選用110鋼級接頭，需將表中數據乘以0.917的系數。如果選用135鋼級接頭，需將表中數據乘以1.125的系數。

Remarks: Joint strength data in the table above is calculated according to steel grade 120 of API standard. If joint with steel grade 110 is applied, the data should multiply a coefficient of 0.917. If joint with steel grade 135 is applied, the data in the table should multiply a coefficient of 1.125.

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Selden GX Anti-Torsion Rope

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Corning 2104341-01 CamSplice Crimp Tool / Anti-Torsion Crimp-ATC

Part #: 745X022 Model #: 2104341-01

The **Corning 2104341-01 CamSplice™ Crimp** Tool is designed to be used in conjunction with 745X022 Mechanical Splice - making a CamSplice **Anti-Torsion** Crimp (ATC) on 900µm fiber. The **Anti-Torsion** Crimp Tool crimps the tubing that fits over the 900 µm fiber perfectly to keep the fiber from turning in the splice. See SPECIFICATIONS tab for complete technical specs.

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Corning
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Corning
Part #: 745X761
Model #: TKT-CAMSPlice-CC
New! QSA 5-11-14

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ABSTRACT

An **anti-torsion** spine fixation device includes an elongated member spanning from one vertebra to another and connected to each vertebra. The **anti-torsion** spine fixation device may span more than one vertebral level, but is fixed bilaterally to the most cephalad and caudad vertebrae.

Publication number	US20100036425 A1
Publication type	Application
Application number	US 12/536,602
Publication date	Feb 11, 2010
Filing date	Aug 6, 2009
Priority date	Aug 6, 2008
Inventors	Michael Barnus, Kevin R. Strauss
Original Assignee	K2M, Inc.
Export Citation	BIBTeX, EndNote, RefMan
Patent Citations (4), Referenced by (33), Classifications (8), Legal Events (4)	
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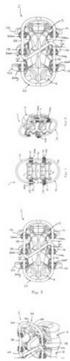
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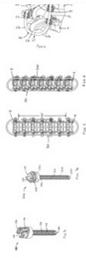
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CLAIMS ⁽¹¹⁾

1. A spinal fixation device comprising:

a first anchor adapted to be attached to a first vertebra;

a second anchor adapted to be attached to the first vertebra,

a third anchor adapted to be attached to a second vertebra;

a first portion of a fixation member coupled to the first and second anchors, the first portion of the fixation member defining a path which approximates an arc between the first and second anchors; and

a second portion of the fixation member coupled to the second and third anchors.

2. The spinal fixation device of claim 1, wherein the first and second portions of the fixation member are coupled to their respective anchors by a set-screw.

3. The spinal fixation device of claim 1, wherein the first and second portions of the fixation member are coupled to their respective anchors by a taper lock mechanism.

4. The spinal fixation device of claim 1, wherein the anchors are disposed on the pedicles of the vertebrae to which they are attached.

5. The spinal fixation device of claim 1, wherein the anchors are pedicle screws.

6. A spinal fixation device comprising:

first and second anchors attachable to a first vertebra;

a third anchor attachable to a second vertebra;

a first portion of a fixation member extending from the first anchor to the second anchor, the first portion defining a first path; and

a second portion of the fixation member extending from the second anchor to the third anchor, the second portion defining a second path, wherein the first path and the second path define an angle therebetween.

7. The spinal fixation device of claim 6, wherein the angle is an acute angle.

8. The spinal fixation device of claim 6, wherein the fixation members are coupled to their respective anchors by a set-screw.

9. The spinal fixation device of claim 6, wherein the fixation members are coupled to their respective anchors by a taper lock mechanism.

10. The spinal fixation device of claim 6, wherein the anchors are disposed on the pedicles of the vertebrae to which they are attached.

11. The spinal fixation device of claim 6, wherein the anchors are pedicle screws.

DESCRIPTION

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to, and the benefit of, U.S. Provisional Patent Application Ser. No. 61/188,090 filed Aug. 6, 2008. The entire contents of the aforementioned application are incorporated by reference herein.

TECHNICAL FIELD

[0002] The present disclosure relates to orthopedic spine surgery, and more particularly, to apparatuses and methods for stabilizing and fixing the spine.

BACKGROUND AND RELATED ART

[0003] Correction of a spinal deformity typically requires stabilization and fixation of

Correction of a spine deformity typically requires administration and fixation of vertebrae in a particular spatial relationship. Surgical spinal correction procedures involve the placement of a plurality of bone pins, anchors, cables, hooks, or screws placed in adjacent vertebrae and using spinal rods to maintain a predetermined spatial relationship between the vertebrae. Such devices may be permanently implanted in the subject. However, in other cases, the devices may be subsequently removed when no longer needed.

[0004] In an effort to maintain normal growth or height while correcting a younger patient's abnormally curved spine, unilateral constructs may be implanted with the purpose of maintaining height on one side of the spine, the convex side of the curve, while the concave side continues to grow. Over time, this method of instrumentation may, on the concave side of the scoliotic curve, grow the spine straight.

[0005] Spinal instrumentation such as pedicle screws and rods may be used to achieve this type of correction. Some traditional rod and screw constructs are subject to becoming misaligned over time.

SUMMARY

[0006] An **anti-torsion** spine fixation device includes a plurality of anchors disposed on opposing pedicles of at least two vertebrae disposed adjacent to a scoliotic curve with a connecting rod traversing the anchors such that the path of the rod approximates a "C". The anchors closest to the convex portion of the scoliotic curve are coupled by the rod. There is no corresponding coupling structure near the concave portion of the scoliotic curve, thereby defining a gap or "corrective opening" in the rod's path which corresponds to the concave portion of the scoliotic curve.

[0007] The **anti-torsion** spine fixation device so configured allows for corrective growth at the corrective opening while restricting growth near the convex portion of the scoliotic curve. Additionally, the **anti-torsion** spine fixation device inhibits further rotation of a non-scoliotic spine. Further, because the rod is joined to opposing anchors on a single vertebra, the **anti-torsion** spine fixation device limits torsional motion of the spine by requiring the torsional motion to be acted on the uni-lateral length of rod which is fixed to bilateral anchors of at least one vertebra.

[0008] According to another aspect of the present disclosure, an **anti-torsion** spine fixation device includes a plurality of anchors and rod segments coupled to vertebrae configured to define multiple opposing corrective openings. The path of the correcting rod is configured such that the device both allows growth at each corrective opening and restricts torsion along its length.

[0009] According to another aspect of the present disclosure, rod segments may be retained in each anchor by a setscrew. According to another aspect of the present disclosure, rod segments may be retained in each anchor by a clamp. According to another aspect of the present disclosure, anchors may be secured to their respective vertebrae using sutures by a pedicle screw.

locations upon a vertebra by a pedicle screw.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The foregoing and other features of the present disclosure will become apparent to one skilled in the art to which the present disclosure relates upon consideration of the following description of the disclosure with reference to the accompanying drawings, wherein:

[0011] FIG. 1 is an anterior plan view of an **anti-torsion** spine fixation device coupled to two vertebrae;

[0012] FIG. 2 is a perspective view of an **anti-torsion** spine fixation device of FIG. 1;

[0013] FIG. 3 is an anterior plan view of the **anti-torsion** spine fixation device configured in a bi-directional construct;

[0014] FIG. 4 is an isometric view of the **anti-torsion** spine fixation device of FIG. 3;

[0015] FIG. 5 is an anterior plan view of an **anti-torsion** spine fixation device having an expanding member configured to accommodate growth of a patient;

[0016] FIG. 6 is a perspective view of the **anti-torsion** spine fixation device of FIG. 5;

[0017] FIG. 7 *a* is a perspective view of a first polyaxial bone screw; and

[0018] FIG. 7 *b* is a perspective view of a second polyaxial bone screw.

DETAILED DESCRIPTION OF THE EMBODIMENTS

[0019] Embodiments of the presently disclosed apparatuses and methods for spinal surgery will now be described in detail with reference to the appended drawings, in which like reference numerals designate identical or corresponding elements in each of the several views. Throughout the following description, the term "proximal," will refer to the end of a device or system that is closest to the operator, while the term "distal" will refer to the end of the device or system that is farthest from the operator. In addition, the "long axis of the spine" runs approximately in the direction from the head to the tailbone, with the direction toward the head referred to as being "cephalad" and the direction toward the tailbone referred to as being "caudad." Further still, for the purposes of this application, the term "medial" indicates a direction toward the middle of the body of the patient while the term "lateral" indicates a direction away from the middle of the body of the patient.

[0020] A spinal fixation device **1** will now be described with reference to FIGS. 1 and 2. The spinal fixation device **1** includes a rod **50**, having rod segments **51**, **52**, **53**, **54**, and **55**. Rod **50** is coupled to anchors **100 a**, **200 a**, **200 b**, and **100 b**. Although rod **50** is illustrated as including a plurality of rod segments for ease of explaining the disclosed features, it is contemplated that rod **50** may be a single continuous rod that is shaped to fit the desired anchor locations or may be a number of rod segments coupled

to fit the desired anchor locations or may be a number of rod segments coupled together that form rod **50**. Anchors **100 a** and **100 b** are coupled to caudal vertebra **4** at respective locations **150** and **153**. Anchors **200 a**, and **200 a** are coupled to cephalad vertebrae **3** at respective locations **151** and **152**.

[0021] In the present disclosure, the term "anchor" refers to devices suitable for coupling one or more rods to one or more bone structures such as a vertebral body. For example, with reference to FIG. 1, anchors **200 a** and **200 b** disposed on cephalad vertebrae **3** are shown as taper lock style polyaxial screws. One example of a taper lock style polyaxial screw is disclosed in commonly assigned International Patent Application Publication No. PCT/US2008/180682, filed on Oct. 22, 2008, and shown in FIG. 7 b of the present disclosure as anchor **200**. Similarly, anchors **100 a** and **100 b** disposed on caudal vertebrae **4** are shown as polyaxial style screws such as those disclosed in commonly assigned International Patent Application Publication No. PCT/US2008/80668, filed on Oct. 22, 2008, and shown in FIG. 7a of the present disclosure as anchor **100**. Both aforementioned applications are incorporated by reference herein in their entirety. Either of these bone anchor types may be used to couple portions of rod **50** to vertebrae.

[0022] With reference to FIG. 7 a, a bone anchor **100** is shown having, an elongated shaft **110** defining a longitudinal axis having a distal end portion and a proximal end portion, a helical thread **120** disposed thereupon, a substantially conical distal tip **130**, and a proximal head assembly **140**. Proximal head assembly **140** and elongated shaft **110** are pivotably coupled to allow angular displacement of proximal head assembly **140** relative to the longitudinal axis. Further, proximal head assembly **140** has a generally U-shaped cross-section defining a channel **141** configured to retain a rod such as spinal fixation rod **50** shown in FIG. 1. Further still, there are opposing threads **142** disposed on opposing faces of channel **141** configured to receive a set-screw (not shown) capable of retaining a rod.

[0023] With reference to FIG. 7 b, a bone anchor **200** is shown having, an elongated shaft **210** defining a longitudinal axis having a distal end portion and a proximal end portion, a helical thread **220** disposed thereupon, a substantially conical distal tip **230**, and a proximal head assembly **240**. Proximal head assembly **240** and elongated shaft **210** are pivotably coupled to allow angular displacement of proximal head assembly **240** relative to the longitudinal axis.

[0024] Further, proximal head assembly **240** includes a collet member **242** and a saddle member **243**. Saddle member **243** has a generally U-shaped cross-section defining a channel **241**. Further still, saddle member **243** has a slot **244** extending from the nadir of the channel **241** towards the bottom of saddle member **243** which essentially bisects the saddle member **241** along a central axis. It is contemplated that slot **244** may not extend all the way through the body portion. Proximal head assembly **240** is configured to retain a rod within channel **241** by the reducing the width of slot **244**.

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[0025] With reference to FIGS. 1 and 2, spinal fixation device 1 is configured to be disposed upon a patient's spine such that the convex portion of a scoliotic curve corresponds to rod segment 52 which spans anchors 100 a and 200 a while the concave portion of the scoliotic curve disposed between anchors 200 b and 100 b has no such corresponding connecting structure defining corrective gap 161 therebetween. Alternatively, the presently disclosed spinal fixation device 1 is adaptable for use in a patient where a uni-lateral rod is desired and the possibility of "crankshafting" is a concern. As a patient's spine grows, such an arrangement of rod segments and anchors allows the concave portion of the curve disposed within corrective gap 161 to grow while maintaining a substantially constant distance at the convex portion of the curve between anchors 100 a and 200 a, thereby helping to correct the scoliotic deformity.

[0026] Traditional unilateral spinal constructs may require additional stabilization to prevent or inhibit torsion about the long axis of the spine in addition to correction of the convex and concave portions of the scoliotic curve.

[0027] As shown in FIGS. 1 and 2, a rod segment 53 disposed on the cephalad vertebrae 3 approximates an arcuate path from rod segment 52 to 54 such that the apex of the arc is directed towards the patient's head. Similarly, a rod segment 51 disposed on caudad vertebrae 4 approximates an arcuate path from rod segment 52 to rod segment 55 such that the apex of the arc is directed towards the patient's feet.

[0028] Segments 51 and 53 provide additional coupling between vertebrae 4 and 3 beyond the clamping pressure exerted on segment 52 at anchors 100 a and 200 a. In such a configuration, rotation of anchors 100 a and 200 a relative to one another about the long axis of the spine is impossible without a corresponding translation of anchors 200 b and 100 b and consequently, a deformation of the rod segments between those anchors. Therefore, the resistance to torsional deformation of the anti-torsion spine fixation device may be defined by the torsional yield strength of the material from which the rod segments are made.

[0029] Where multiple scoliotic curves are present, additional anchors and rods may be configured in a curve which approximates multiple anti-torsion spine fixation devices whose corrective action is directed toward the multiple scoliotic curves while maintaining torsional rigidity about the long axis of the spine.

[0030] As shown in FIGS. 3 and 4, bi-lateral spinal fixation device 2 includes the constructs present in spinal fixation device 1 with the addition of constructs coupled to intermediate vertebrae 5 optionally disposed between cephalad vertebrae 3 and caudad vertebrae 4. The constructs disposed on vertebrae 3 and 4 are shown in FIGS. 1 and 2 and described hereinabove. The differences between spinal fixation device 1 and spinal fixation device 2 are described hereinbelow.

[0031]

In this configuration, spine fixation device **2** has opposing anchors **200 c** and **200 d** at locations **154** and **155** on an intermediate vertebra **4**. Additionally, spine fixation device **2** includes rod **60**, which includes the rod segments present in rod **50** described hereinabove with the additional rod segments being discussed hereinafter. Rod segment **52** joins the cephalad portion of anchor **200f** to the caudad portion of anchor **200 c**, rod segment **57** joins cephalad portion of anchor **200 c** to the caudad portion of anchor **200 d**, and rod segment **58** joins the cephalad portion of anchor **200 d** to the caudad portion of anchor **200 b** such that the curve approximated by adjoining rod segments defines opposing corrective gaps **162** and **163**. Rod segments **52**, **58** maintain the torsional rigidity of the device established by the curved paths of rods **53** and **51** in the manner described above with regards to fixation device **1**. Specifically, rotation of anchors **200 c** and **200 f** relative to one another creates a corresponding displacement of anchors **200 d** and **200 g** which is resisted by the rod segments interconnecting the aforementioned anchors. Rod **60** further includes rod segments **62**, **63**, **66**, and **67** as shown in FIG. 4. Rod segments **62**, **63** connect rod segment **57** with rod segments **58** and **52**. Rod segment **66** includes rod segments **66 a**, **66 b**, and **66 c**, while rod segment **67** includes rod segments **67 a**, **67 b**, and **67 c**. Similar to rod **50** (FIG. 1), rod **60** is illustrated as including a plurality of rod segments for ease of explaining the disclosed features, it is contemplated that rod **60** may be a single continuous rod that is shaped to fit the desired anchor locations or may be a number of rod segments coupled together that form rod **60**.

[0032] As shown in FIGS. 5 and 6, an additional stabilization device **300** such as a coupled rod device, a sliding rod device, and anchors may be disposed within corrective gap **161** without coming in contact with the **anti-torsion** spine fixation device. The additional stabilization device may include, for example, an automatically lengthening spine device such as that disclosed by commonly assigned PCT application PCT/US2009/33553 filed on Feb. 9, 2009, the disclosure of which is herein incorporated by reference in its entirety. Such devices are generally referred to as "growing spine devices." Other known growing spine devices include, for example, distraction rods such as those disclosed by Bumpus in U.S. Pat. No. 4,931,055 and implantable spinal distraction splints such as those disclosed by Ulrich in U.S. Pat. No. 4,658,809.

[0033] The use and function of spinal fixation device **1** will be discussed during the course of a typical installation procedure and as part of the treatment of one or more scoliotic deformities. Initially, the location, orientation, and breadth of one or more scoliotic curves on a patient's spine will be determined using methods known in the art. Next, an operator identifies at least one caudad vertebrae **4** and cephalad vertebrae **3** for each curve such that a substantial portion of the curve is disposed between the aforementioned caudad and cephalad vertebrae. Next, an operator will secure at least two anchors to each selected vertebrae using methods commonly known in the art such that the anchors are disposed on opposing pedicles of their

shown in the art such that the anchors are disposed on opposing portions of their respective vertebrae.

[0034] A configuration of anchors and screws corresponding to the preceding paragraph is shown in FIGS. 1 and 2.

[0035] Next, in the event that only one pair of caudad and cephalad vertebrae have been selected, an operator will couple spinal fixation rod **50, 60** to each anchor using a set screw as shown respectively in FIGS. 1 and 3, a cam/clamp as is known in the art, or any other combination of rod coupling devices known in the art. Spinal fixation rod **50** includes a plurality of rod segments configured in a shape approximating a "C" such that the fixation rod spans the convex portion of the curve while there is no corresponding structure on the concave portion, defining a corrective opening. Further, the path of the rod segments defines arcuate caudad and cephalad rod portions which join the opposing anchors disposed on their respective caudad and cephalad vertebrae.

[0036] A configuration of anchors and fixation rod segments corresponding to the preceding paragraph is shown in FIGS. 1 and 2.

[0037] As a patient grows, the spacing of the vertebrae at the joined convex side of the scoliotic curve remains relatively constant, while the spacing of the vertebrae at the corrective gap corresponding to the convex portion is allowed to expand with the patient's growth. Further, the long segments of the spinal fixation rod provide improved torsional coupling for the device thereby reducing the tendency of the spine to develop new torsional deformities.

[0038] Finally, all or part of the device may be surgically removed or altered at the conclusion of modification of treatment.

[0039] It will be understood that various modifications may be made to the embodiments of the presently disclosed spinal fixation systems. Therefore, the above description should not be construed as limiting, but merely as exemplifications of embodiments. Those skilled in the art will envision other modifications within the scope and spirit of the present disclosure.

PATENT CITATIONS

Cited Patent	Filing date	Publication date	Applicant	Title
US4875471 *	Mar 14, 1988	Oct 24, 1989	Codespi Corporation	Device for correcting deformities of the spine
US7985244 *	Sep 27, 2005	Jul 26, 2011	Depuy Spine, Inc.	Posterior dynamic stabilizer devices
US20060084991 *	Sep 27, 2005	Apr 20, 2006	Depuy Spine, Inc.	Posterior dynamic stabilizer devices
US20060282078 *	Jun 10, 2005	Dec 14, 2006	Depuy Spine, Inc.	Posterior dynamic stabilization cross connectors

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REFERENCED BY

Citing Patent	Filing date	Publication date	Applicant	Title
US8066739		Nov 29, 2011	Jackson Roger P	Tool system for dynamic spinal implants
US8100915		Jan 24, 2012	Jackson Roger P	Orthopedic implant rod reduction tool set and method
US8105368	Aug 1, 2007	Jan 31, 2012	Jackson Roger P	Dynamic stabilization connecting member with slitted core and outer sleeve
US8152810	Nov 23, 2004	Apr 10, 2012	Jackson Roger P	Spinal fixation tool set and method
US8162948		Apr 24, 2012	Jackson Roger P	Orthopedic implant rod reduction tool set and method
US8273089		Sep 25, 2012	Jackson Roger P	Spinal fixation tool set and method
US8292092	May 13, 2009	Oct 23, 2012	Jackson Roger P	Orthopedic implant rod reduction tool set and method
US8353932	Aug 20, 2008	Jan 15, 2013	Jackson Roger P	Polyaxial bone anchor assembly with one-piece closure, pressure insert and plastic elongate member
US8366745	Jul 1, 2009	Feb 5, 2013	Jackson Roger P	Dynamic stabilization assembly having pre-compressed spacers with differential displacements
US8377067		Feb 19, 2013	Roger P. Jackson	Orthopedic implant rod reduction tool set and method
US8394133	Jul 23, 2010	Mar 12, 2013	Roger P. Jackson	Dynamic fixation assemblies with inner core and outer coil-like member
US8475498	Jan 3, 2008	Jul 2, 2013	Roger P. Jackson	Dynamic stabilization connecting member with cord connection
US8556938	Oct 5, 2010	Oct 15, 2013	Roger P. Jackson	Polyaxial bone anchor with non-pivotable retainer and pop-on shank, some with friction fit
US8591515	Aug 26, 2009	Nov 26, 2013	Roger P. Jackson	Spinal fixation tool set and method
US8591560	Aug 2, 2012	Nov 26, 2013	Roger P. Jackson	Dynamic stabilization connecting member with elastic core and outer sleeve
US8613760	Dec 14, 2011	Dec 24, 2013	Roger P. Jackson	Dynamic stabilization connecting member with slitted core and outer sleeve
US8696711	Jul 30, 2012	Apr 15, 2014	Roger P. Jackson	Polyaxial bone anchor assembly with one-piece closure, pressure insert and plastic elongate member
US8845649	May 13, 2009	Sep 30, 2014	Roger P. Jackson	Spinal fixation tool set and method for rod reduction and fastener insertion
US8852239	Feb 17, 2014	Oct 7, 2014	Roger P. Jackson	Sagittal angle screw with integral shank and receiver
US8870928	Apr 29, 2013	Oct 28, 2014	Roger P. Jackson	Helical guide and advancement flange with radially loaded lip
US8882803 *	Apr 1, 2009	Nov 11, 2014	Globus Medical, Inc.	Orthopedic clamp and extension rod
US8894657	Nov 28, 2011	Nov 25, 2014	Roger P. Jackson	Tool system for dynamic spinal implants
US8911478	Nov 21, 2013	Dec 16, 2014	Roger P. Jackson	Splay control closure for open bone anchor
US8926670	Mar 15, 2013	Jan 6, 2015	Roger P. Jackson	Polyaxial bone screw assembly
US8926672	Nov 21, 2013	Jan 6, 2015	Roger P. Jackson	Splay control closure for open bone

US8920612	Nov 21, 2013	Jan 9, 2015	Roger P. Jackson	anchor
US8936623	Mar 15, 2013	Jan 20, 2015	Roger P. Jackson	Polyaxial bone screw assembly
US8979904	Sep 7, 2012	Mar 17, 2015	Roger P. Jackson	Connecting member with tensioned cord, low profile rigid sleeve and spacer with torsion control
US8998959	Oct 19, 2011	Apr 7, 2015	Roger P. Jackson	Polyaxial bone anchors with pop-on shank, fully constrained friction fit retainer and lock and release insert
US8998960	May 17, 2013	Apr 7, 2015	Roger P. Jackson	Polyaxial bone screw with helically wound capture connection
US9050139	Mar 15, 2013	Jun 9, 2015	Roger P. Jackson	Orthopedic implant rod reduction tool set and method
US9055978	Oct 2, 2012	Jun 16, 2015	Roger P. Jackson	Orthopedic implant rod reduction tool set and method
US20100256683 *	Apr 1, 2009	Oct 7, 2010	Andrew Iott	Orthopedic Clamp and Extension Rod
US20150039034 *	Aug 1, 2013	Feb 5, 2015	Musc Foundation For Research Development	Skeletal bone fixation mechanism

* Cited by examiner

CLASSIFICATIONS

U.S. Classification	606/264, 606/301
International Classification	A61B17/86, A61B17/70
Cooperative Classification	A61B17/7032, A61B17/7011
European Classification	A61B17/70B2, A61B17/70B1G

LEGAL EVENTS

Date	Code	Event	Description
Aug 28, 2009	AS	Assignment	Owner name: K2M, INC., VIRGINIA Free format text: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:BARRUS, MICHAEL;STRAUSS, KEVIN R;SIGNING DATES FROM 20090810 TO 20090818;REEL/FRAME:023160/0799
Jul 8, 2011	AS	Assignment	Owner name: SILICON VALLEY BANK, CALIFORNIA Free format text: ADDENDUM TO INTELLECTUAL PROPERTY SECURITY AGREEMENT;ASSIGNOR:K2M, INC.;REEL/FRAME:026565/0482 Effective date: 20110629
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May 22, 2013	AS	Assignment	Owner name: K2M, INC., VIRGINIA Free format text: TERMINATION;ASSIGNOR:SILICON VALLEY BANK;REEL/FRAME:030918/0426 Effective date: 20121029

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