

Nr. inreg.: 8070 / 27.02.2019

Referință: Procedura simplificată organizată de CONPET SA în vederea atribuirii contractului de execuție lucrări de Reabilitare a rampelor de încărcare țiței Marghita și Imeci

Urmare a clarificărilor solicitate de către operatorii economici interesați cu privire la documentația publicată pentru procedura de achiziție mai sus menționată, vă comunicăm următoarele:

1. Rampa de incarcare titei Marghita

1.1. In documentul A636.4-MC-SP-P – Specificatie pompe titei, in titlul documentului pompele sunt mentionate ca fiind centrifuge, iar in corpul documentului sunt descrise ca si pompe cu cavitati progressive.

Va rugam sa clarificati tipul constructiv al pompelor de titei.

Raspuns:

Se vor utiliza pompe cu cavitati progresive

1.2. In documentul A636.4-MC-SP-P – Specificatie pompe titei, nu sunt specificati urmatoorii parametri:

- 1.2.1. Temperaturile minime/maxime de operare si ambientale
- 1.2.2. Viscositatea fluidului de lucru (titei) pe domeniul temperaturilor de operare
- 1.2.3. Densitatea fluidului de lucru (titei) pe domeniul temperaturilor de operare
- 1.2.4. Presiunea de vapori a fluidului de lucru (titei) pe domeniul temperaturilor de operare
- 1.2.5. Temperatura de congelare a titeiului
- 1.2.6. Presiunea de aspiratie, respectiv NPSH disponibil si NPSH necesar
- 1.2.7. Clasificarea echipamentului din punct de vedere ATEX

Va rugam sa indicati toti parametrii mentionati mai sus, in vederea intocmirii cererilor de oferta catre potentialii furnizori de pompe.

Raspuns:

Temperaturi minime/maxime ambientale = -20C ++280C

Temperaturi minime/maxime de operare = +140C ++280C

Presiunea de vapori a fluidului = PV /37.8 °C = 135 mmHg

Presiunea de aspiratie =0,075 bar

NPSH disponibil = 1,69 m

NPSH disponibil mai mic sau egal cu NPSH necesar

Densitate la 15 °C = 0,8333 g / cm³

Viscositate cinematica la 20 ° = 48,26 cSt

Temperatura de congelare = +14oC

Clasificare ATEX = II C T 4

1.3. In documentul 301-EL-203_Rev.00_TE-CF_Schema electrica monofilara nu este tratata alimentarea cu energie electrica a motoarelor pompelor de titei.

Va rugam sa confirmati ca legaturile electrice la pompele de titei nu fac parte din proiect, se folosesc conexiunile existente si cutiile de comanda locala existente.

Raspuns:

Motoarele existente ale pompelor nu se schimba si se folosesc conexiunile existente

1.4. In documentul A636.4-Specificatie pompa decantor, nu sunt specificati urmatoorii parametri:

- 1.4.1. Viscositatea fluidului de lucru pe domeniul temperaturilor de operare
- 1.4.2. Densitatea fluidului de lucru pe domeniul temperaturilor de operare
- 1.4.3. Presiunea de vapori a fluidului de lucru pe domeniul temperaturilor de operare
- 1.4.4. Temperatura de congelare a fluidului de lucru
- 1.4.5. Clasificarea echipamentului din punct de vedere ATEX

Va rugam sa indicati toti parametrii mentionati mai sus, in vederea intocmirii cererilor de oferta catre potentialii furnizori de pompe

Raspuns:

Densitate la 15 °C = 0,8333 g / cm³
Vascozitate cinematica la 20 ° = 48,26 cSt
Temperatura de congelare = +14°C
Presiunea de vapori a fluidului = PV /37.8 °C = 135 mmHg
Clasificare ATEX = IP 60

1.5. In documentul 301-EL-204_Rev.00_TE-CF_Schema electrica detaliata (trifilara) este indicata cutie de actionare locala, dar aceasta nu se regaseste nici ca specificatie pentru procurare si nici nu este inclusa in cantitatile de lucrari.

Va rugam sa indicati daca se va intocmi fisa tehnica pentru cutia de actionare locala si daca aceasta se include in oferta.

Raspuns:

Cutie de actionare locala se include in oferta

1.6. Documentatia tehnica nu contine o fisa tehnica a fluidului de lucru. Din experienta cunoastem caracterul special al titeiului din zona Marghita – Suplacu de Barcau.

Din studiul documentatiei, nu am regasit a fi prevazuta o solutie de incalzire a traseelor de conducta.

Va rugam sa confirmati ca nu este necesara insotirea termica a traseelor de conducta supraterrane

Raspuns:

Conductele supraterrane sunt preizoleaza termic cu spuma poliuretana rigida, izolarea in zona imbinarilor sudate si la schimbarile de directive realizandu-se cu cochilii din acelasi material.

1.7. Din studiul documentatiei nu este clara solutia de izolare termica a imbinarilor in flanse si a armaturilor.

Va rugam sa clarificati solutia tehnica privind izolarea termica a imbinarilor in flanse si a armaturilor (carcase fixe sau detasabile).

Raspuns:

Izolarea termica a imbinarilor in flanse si armaturilor se realizeaza in carcase detasabile.

1.8. In documentul 2017-301-IA-006_Rev.00_SP-Robinet on-off actionat cu motor electric este mentinuta alimentare 230V/50Hz **DAR** in doc. A636.4-MC-SP-B specificatie tehnica brat incarcare, este indicate pentru acelasi robinet MOV alimentare 400V/50Hz

Va rugam sa clarificati.

Raspuns:

Asa cum se mentioneaza in nota 1 din documentul 2017-301-IA-006:

“Proiectantul recomanda insistent achizitionarea bratelor de comanda complet echipate (cel putin cu: intrerupator de nivel maxim in cisterna, robinet on-off actionat electric, tablou de semnalizare si comanda pentru incarcare).” Ambele variante de alimentare pentru actuatorul electric (a) curent monofazat, asa cum specifica proiectul de instrumentatie si b) curent trifazat, asa cum specifica documentul mecanic) sunt acceptabile, iar varianta finala depinde exclusiv de furnizorul bratelor de incarcare.

1.9. In documentul A636.4-AM-Antemasuratoare este mentionat la procurare si montaj sistemul de protectie LIFE LINE. Acesta nu este insa tratat din punct de vedere tehnic nici in Memoriul Tehnic si nici in piesele desenate.

Va rugam sa completati documentatia cu o fisa tehnica de produs pentru procurare.

Raspuns:

Anexat se regaseste descrierea sistemului de protectie

1.10. În documentul A636.4-CM-MT-Memoriu tehnic, sunt prevăzute două cabine de pază și supraveghere conform desen A636.4-CM-01. Acestea sunt menționate și în antemasurătoare la capitolul Arhitectura.

Având în vedere că în desenul A636.4-CM-01, nu se regăsește nicio referire la aceste cabine, vă rugăm să adăugați detalii de execuție corespunzătoare.

Răspuns:

Specificația tehnică pentru cabină este conform fișei anexate, A636.4-A-SP

1.11. În documentul 2017-301-IA-010_Rev.00_SP Tablou automatizare – Sistem de semnalizare și interblocare, se indică montarea acestuia în clădirea administrativă.

Vă rugăm să confirmați soluția de montaj în interiorul clădirii administrative a panoului de automatizare, având în vedere că distanța între aceasta și punctul cel mai apropiat al rampei de încărcare este de cca. 30m iar fata de punctul cel mai îndepărtat este de cca. 90m.

Răspuns:

În proiectul de instrumentație și automatizare sunt prevăzute cinci panouri locale pentru controlul împănării, câte unul pentru fiecare brat, un tablou de monitorizare/ alarmare poziție brat și podet rabatabil în zona de încărcare (în apropierea bratelor) și un tablou de automatizare XA-00 amplasat în clădirea administrativă (dispecerat).

Lungimile indicate în jurnalul de cabluri sunt corecte.

1.12. În documentație nu se regăsește scheme monofilare sau multifilare pentru panoul de automatizare și respectiv pentru panoul de semnalizare și alarmare.

Vă rugăm să completați corespunzător documentația de execuție.

Răspuns:

Asa cum se menționează în jurnalul de cabluri pentru instrumentație, pagina 3, Nota 6: "Cablurile pentru comandă și semnalizarea MOV-urilor vor fi alese după încheierea contactului și primirea documentației tehnice pentru actuatorii electrice, în conformitate cu cerințele producătorului." Această notă se extinde și asupra schemei de conexiuni, care depinde într-o măsură foarte mare de soluția oferită de furnizorul bratelor de încărcare.

1.13. În Fișa de date, la capitolul III.2.1.b Capacitatea de exercitare a capacității profesionale, la Cerința 2 se solicită atestat ANRE tip C1B pentru proiectare de linii electrice aeriene sau subterane, cu tensiuni nominale de 0.4kV-100kV

Având în vedere că licitația se referă la un contract de execuție, vă rugăm să precizați dacă este necesar un atestat ANRE tip C1B pentru proiectare.

Răspuns:

Cerința 2 din fișa de date la capitolul III.2.1.b Capacitatea de exercitare a capacității profesionale va deveni "Se solicită atestat ANRE de tip A - încercări de echipamente și sisteme electrice și tip Be - execuție instalații electrice ext/ int la tens. de 0.4 KV, valabile la data deschiderii ofertelor.

2. Rampa de încărcare Imeci

2.1. În documentul A636.3-MC-MT 1 – Memoriu tehnic montaj conducte Rampa de încărcare Imeci, se stipulează că pompele existente pentru titei și pentru apa sarată trebuie înlocuite cu altele noi, dar în documentație nu am regăsit fișe tehnice pentru aceste pompe.

Vă rugăm să indicați unde putem găsi aceste fișe de date, sau să completați corespunzător documentația tehnică prin adăugarea pieselor ce lipsesc.

Răspuns:

Caracteristici titei Imeci

Densitate la 15°C = 0,8555 g / cm³

Vascozitate cinematică la 20° = 68,34 cSt

Temperatura de congelare = +18°C

Pompe de apa sarata 2 bucatiDebit = 32 m³/h

Presiune = 35 bar

Pompe titei 2 bucatiDebit = 200 m³/h

Presiune = 5 bar

Clasificare ATEX = II C T 4

2.2. In documentul A636.3-MC-02 Izometrie distribuitor, este cuprinsa cantitatea de 55m teava DN200, valoare care este in concordanta cu prevederile din documentul A636.3-MC-MT 1 – Memoriu tehnic montaj conducte. In schimb in Antemasuratoarea A636.3-AM la capitolul V CONDUCTE, subcapitolul B Colector si legaturi conducte brate de incarcare s-au considerat numai 3 metri conducta DN200.

Va rugam sa indicati ce cantitati vor fi cotate in oferta pentru cazul semnalat.

Raspuns:

La capitolul V CONDUCTE din document A636.3-AM, subcapitolul B, se va cota astfel:

- Art 6000168 (...) = 3m (conducta vertical ce alimenteaza distribuitorul, vezi desen A636.3-MC-02)
- Art 6000028 (...) = 55m (distribuitorul)

2.3. In documentatia electrica nu este tratata alimentarea cu energie electrica a motoarelor pompelor de titei si de apa sarata.

Va rugam sa confirmati ca legaturile electrice la pompele de titei si apa sarata nu fac parte din proiect, se folosesc conexiunile existente si cutiile de comanda locala existente.

Raspuns:

Alimentarea nu a fost tratata intrucat motoarele existente se mentin.

2.4. In documentul A636.3-AM -Antemasuratoare este mentionat la procurare si montaj sistemul de protectie LIFE LINE. Acesta nu este insa tratat din punct de vedere tehnic nici in Memoriul Tehnic si nici in piesele desenate.

Va rugam sa completati documentatia cu o fisa tehnica de produs pentru procurare

Raspuns:

Anexat se regaseste descrierea sistemului de protectie.

2.5. In documentul A636.3-AM -Antemasuratoare, sunt prevazute la sectiunea Arhitectura – Dotari doua cabine de paza si supraveghere, dar noi nu am regasit aceste cabine ca fiind tratate din punct de vedere tehnic.

Va rugam sa indicati unde putem gasi date despre aceste repere, sau sa completati corespunzator documentatia tehnica prin adaugarea pieselor ce lipsesc.

Raspuns:

Specificatia tehnica pentru cabina este conform fisei anexate, A636.3-A-SP

2.6. In documentul 2017-300-IA-010_Rev.00_SP-Dulap– Sistem de semnalizare si interblocare, se indica montarea acestuia in cladirea administrativa.

Va rugam sa confirmati solutia de montaj in interiorul cladirii administrative a panoului de automatizare, avand in vedere ca distanta intre aceasta si punctul cel mai apropiat al rampei de incarcare este de cca. 40-45m iar fata de punctul cel mai indepartat este de cca. 95-100m.

Raspuns:

In proiectul de instrumentatie si automatizare sunt prevazute cinci panouri locale pentru controlul impamantarii, cate unul pentru fiecare brat, un tablou de monitorizare/ alarmare pozitie brat si podet rabatabil in zona de incarcare (in apropierea bratelor) si un tablou de automatizare XA-00 amplasat in cladirea administrativa (dispecerat).

Lungimile indicate in jurnalul de cabluri sunt corecte.

2.7. In documentatie nu se regaseste schemele monofilare sau multifilare pentru panoul de automatizare si respectiv pentru panoul de semnalizare si alarmare.

Va rugam sa completati corespunzator documentatia de executie.

Aceste scheme vor fi elaborate de catre furnizorul panourilor in functie de echipamentele propuse de ofertant. (tip sensor brate de incarcare, robineti actuati, butoane, chei, lampi semnalizare etc.)

Menționăm că oferta va fi elaborată ținând cont de indicațiile precizate mai sus și că restul cerințelor rămân neschimbate.

Vă mulțumim.

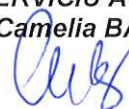
DIRECTOR ECONOMIC
Ec. Sanda TOADER



ȘEF SERVICIU ACHIZIȚII
Ing. Florina POPESCU



SERVICIU ACHIZIȚII
Exp. AP Camelia BARBUCEANU



SPECIFICATIE CABINA SUPRAVEGHERE ARHITECTURA

Beneficiar : **CONPET S.A.**

Cod document : **A636.3-A-SP**

Cod proiect : **A636.3**

Faza : **PTh**

Revizie: **Rev 0**

Denumire proiect: **REABILITARE RAMPA DE INCARCARE IMENI - IMECI,
JUD. COVASNA**

Întocmit: **Arh. S.Ionescu**

Verificat: **Ing. A.Ionescu**

Aprobat: **Ing. A.Ionescu**

Necesar : 2 bucati

Cabinele de paza (operator) vor fi realizate din panouri tip sandwich din fibra de sticla, umplute cu spuma poliuretunica, au o buna izolare termica si fonica si se gasesc pe stoc intr-o gama variata de dimensiuni; au ca destinatie spatii pentru personalul de paza, personalul care incadreaza puncte de control sau mici incaperi tip birou pentru diverse aplicatii. Cabinele de paza sunt caracterizate ca fiind constructii etanse, estetice si care se integreaza armonios in orice peisaj.

Peretii cabinelor vor fi confectionati din panouri duble din poliester armat cu fibra de sticla, la interior fiind injectata spuma poliuretunica ce asigura izolatia termica si fonica; rezulta astfel o structura de tip "sandwich" cu grosimea de 40mm. Construita in acest mod, cabina de paza asigura atat un grad ridicat de izolare termica si fonica cat si protectie anticoroziva, impiedicand depunerile de praf si alte impuritati. Partea exterioara a cabinei de paza va fi protejata cu un invelis ce contine un pigment special care asigura protectie impotriva razelor solare.

Usile si ferestrele vor fi confectionate din profil de aluminiu vopsit in camp electrostatic, fiind disponibile intr-o gama larga de culori. Geamul folosit este de tip securizat si are o grosime de 4 mm.

Cabina va fi dotata cu o singura usa amplasata pe pe fatada acces , cu deschidere exterioară , dotata cu sistem deschidere/inchidere cu amortizor.

Ferestrele vor fi amplasate astfel:

- pe usa;
- pe fatada laterala stanga - 1 bucata;
- pe fatada laterala dreapta - 1 bucata

astfel incat vizibilitatea operatorului sa fie de 180°.

Utilizare pentru cabina: supraveghere posturi de incarcare vagoane C.F.

Culoare: cabina paza standard – alb,albastru,verde (sau conform cerinte beneficiar);

Podeaua unei cabine va fi realizata din pal hidrofugat protejat cu un strat de poliester, sau OSB simplu, fixat pe un cadru metalic.

Dimensiuni cabina: 1.00×1.00×2.20 m.

Denumire proiect:

**REABILITARE RAMPA DE
INCARCARE IMENI - IMECI, JUD.
COVASNA**

Cod proiect: A636.3

Beneficiar: CONPET S.A.

Cod document: A636.3-A-SP

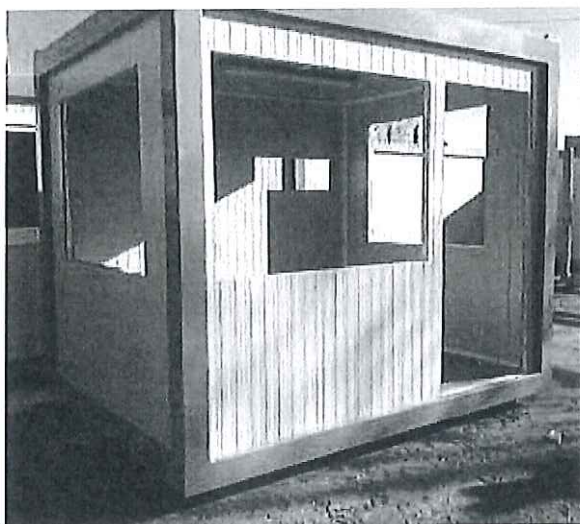
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Revizia: Rev. 0

Data: 09.2018

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SPECIFICATIE CABINA- ARHITECTURĂ



Montarea cabinelor : montarea se face pe platforma (pasarela metalica) in spatiul special destinat la capetele constructiei metalice.

Cabinele au rezistenta mare la variatii de temperatura (-40 grade C....+70 grade C) si un coeficient scazut de deformare. Nu sunt afectate de mediile corozive, sunt usor de intretinut, se spala usor cu detergent, sunt igienice.

SPECIFICATIE CABINA SUPRAVEGHERE ARHITECTURA

Beneficiar : **CONPET S.A.**

Cod document : **A636.4-A-SP**

Cod proiect : **A636.4**

Faza : **PTh**

Revizie: **Rev 0**

Denumire proiect: **REABILITARE RAMPA DE INCARCARE TITEI MARGHITA,
JUD. BIHOR**

Întocmit: **Arh. S.Ionescu**

Verificat: **Ing. A.Ionescu**

Aprobat: **Ing. A.Ionescu**

Necesar : 2 bucati

Cabinele de paza (operator) vor fi realizate din panouri tip sandwich din fibra de sticla, umplute cu spuma poliuretana, au o buna izolare termica si fonica si se gasesc pe stoc intr-o gama variata de dimensiuni; au ca destinatie spatii pentru personalul de paza, personalul care incadreaza puncte de control sau mici incaperi tip birou pentru diverse aplicatii. Cabinele de paza sunt caracterizate ca fiind constructii etanse, estetice si care se integreaza armonios in orice peisaj.

Peretii cabinelor vor fi confectionati din panouri duble din poliester armat cu fibra de sticla, la interior fiind injectata spuma poliuretana ce asigura izolatia termica si fonica; rezulta astfel o structura de tip "sandwich" cu grosimea de 40mm. Construita in acest mod, cabina de paza asigura atat un grad ridicat de izolare termica si fonica cat si protectie anticoroziva, impiedicand depunerile de praf si alte impuritati. Partea exterioara a cabinei de paza va fi protejata cu un invelis ce contine un pigment special care asigura protectie impotriva razelor solare.

Usile si ferestrele vor fi confectionate din profil de aluminiu vopsit in camp electrostatic, fiind disponibile intr-o gama larga de culori. Geamul folosit este de tip securizat si are o grosime de 4 mm.

Cabina va fi dotata cu o singura usa amplasata pe pe fatada acces , cu deschidere exterioară , dotata cu sistem deschidere/inchidere cu amortizor.

Ferestrele vor fi amplasate astfel:

- pe usa;
- pe fatada laterala stanga - 1 bucata;
- pe fatada laterala dreapta - 1 bucata

astfel incat vizibilitatea operatorului sa fie de 180°.

Utilizare pentru cabina: supraveghere posturi de incarcare vagoane C.F.

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Dimensiuni cabina: 1.00×1.00×2.20 m.



Montarea cabinelor : montarea se face pe platforma (pasarela metalica) in spatiul special destinat la capetele constructiei metalice.

Cabinele au rezistenta mare la variatii de temperatura (-40 grade C....+70 grade C) si un coeficient scazut de deformare. Nu sunt afectate de mediile corozive, sunt usor de intretinut, se spala usor cu detergent, sunt igienice.

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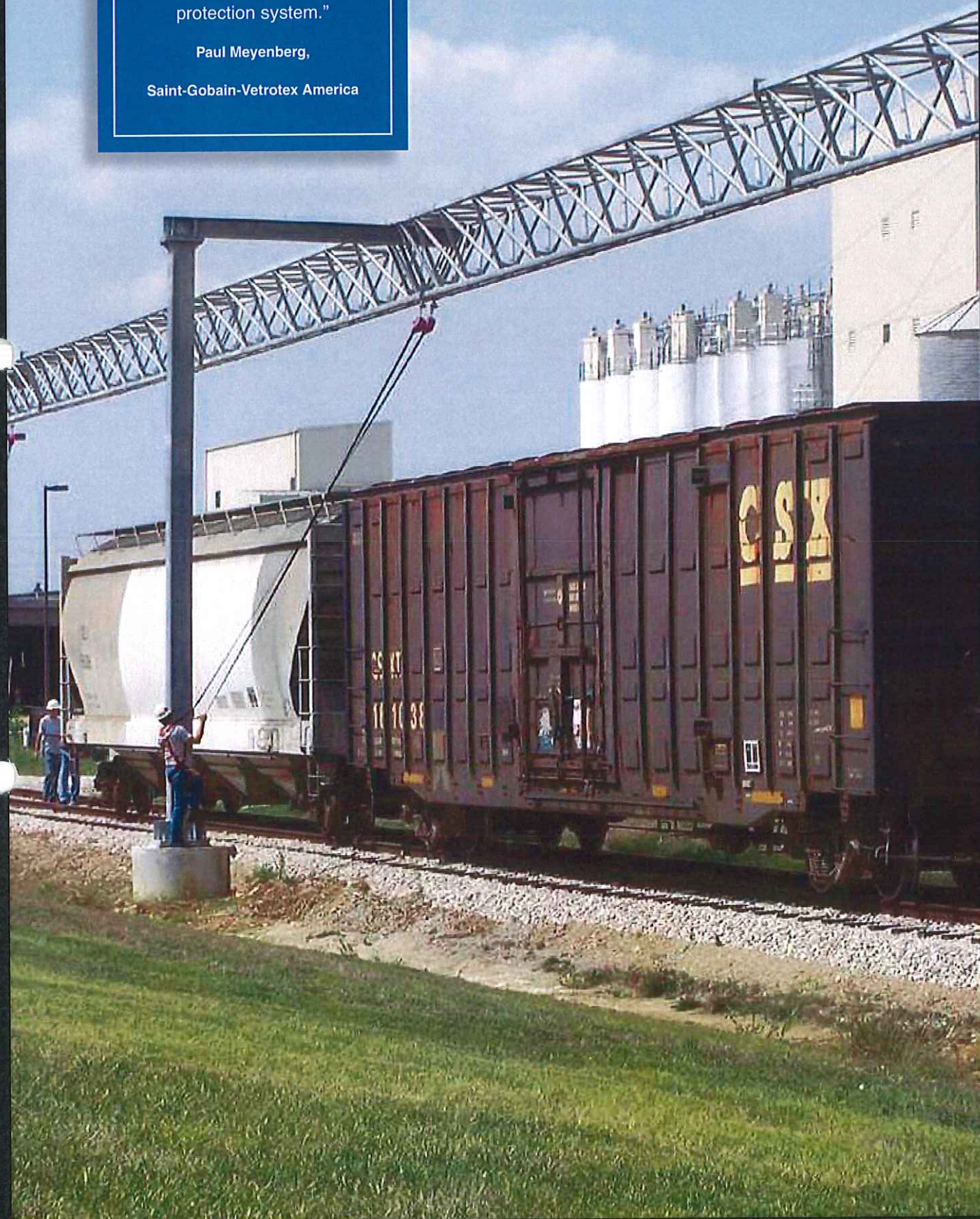
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FLS offers every variety of fall arrest system for the bulk loading industry, from economical cable-based systems to FlexRail to mobile access platforms to truck tarping systems. We take into account your unique requirements and assist you in making the optimum choice for your particular application. As a turnkey provider, we design and install all options of fall protection, without bias. When you partner with FLS, the ultimate result is a system your workers will use without hesitation, because it keeps them safe without interfering with their jobs. And a safe, confident worker is a more efficient worker. That's why our clients say:

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protection system."

Paul Meyenberg,
Saint-Gobain-Vetrotex America



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FLS fall protection specialists are uniquely qualified to identify fall hazards at your site and are always available for consultation.

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Upon award of the project, Flexible Lifeline Systems will perform an engineering site visit to obtain site-specific measurements in order to form the basis of the design of the system and for preparation of plans and drawings.

System Design

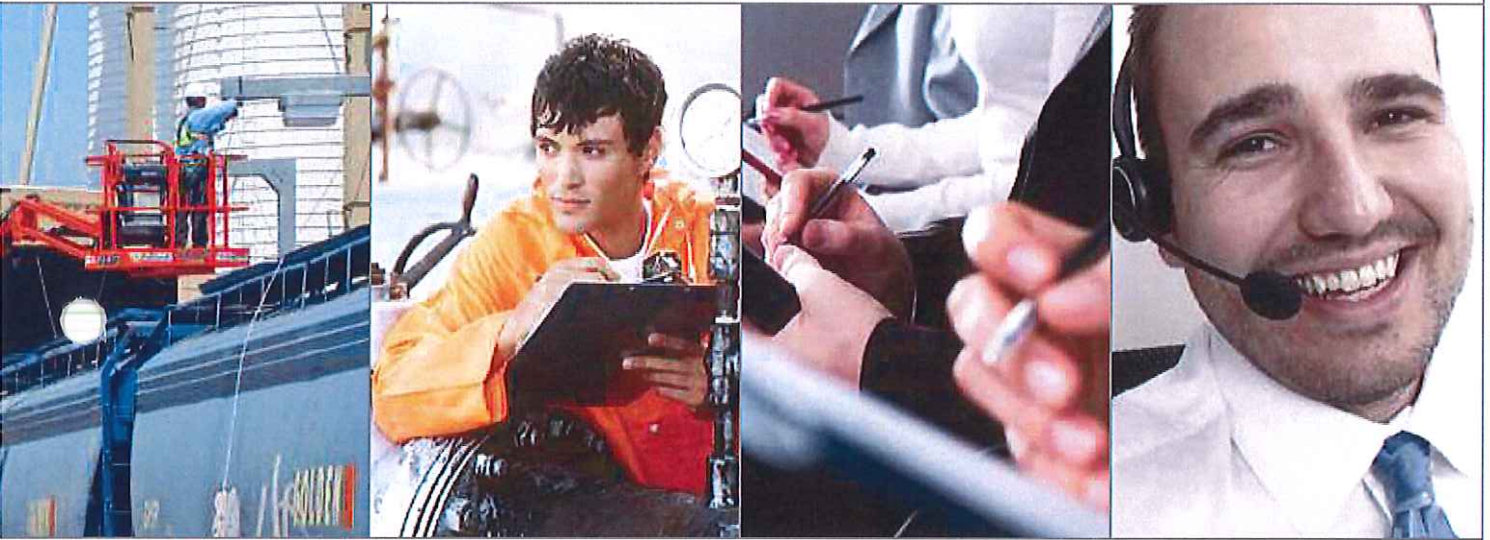
Our professional engineers will work hand-in-hand with your staff to design systems in accordance with stringent specifications and in compliance with all local and federal regulations.

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Our in-house fabrication facility and quality assurance programs ensure strict adherence to procedures, specifications and full material traceability. A Flexible Lifeline System is a quality product.

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Sean Sandwell - Azteca Milling



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FLS offers a full range of installation options – no one-size-fits-all approach for our clients. Again, our engineers consider every aspect of your facility's size and configuration. The rigorously trained FLS installation team implementing your design will leave you with a system custom-made for your individual needs.

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Training

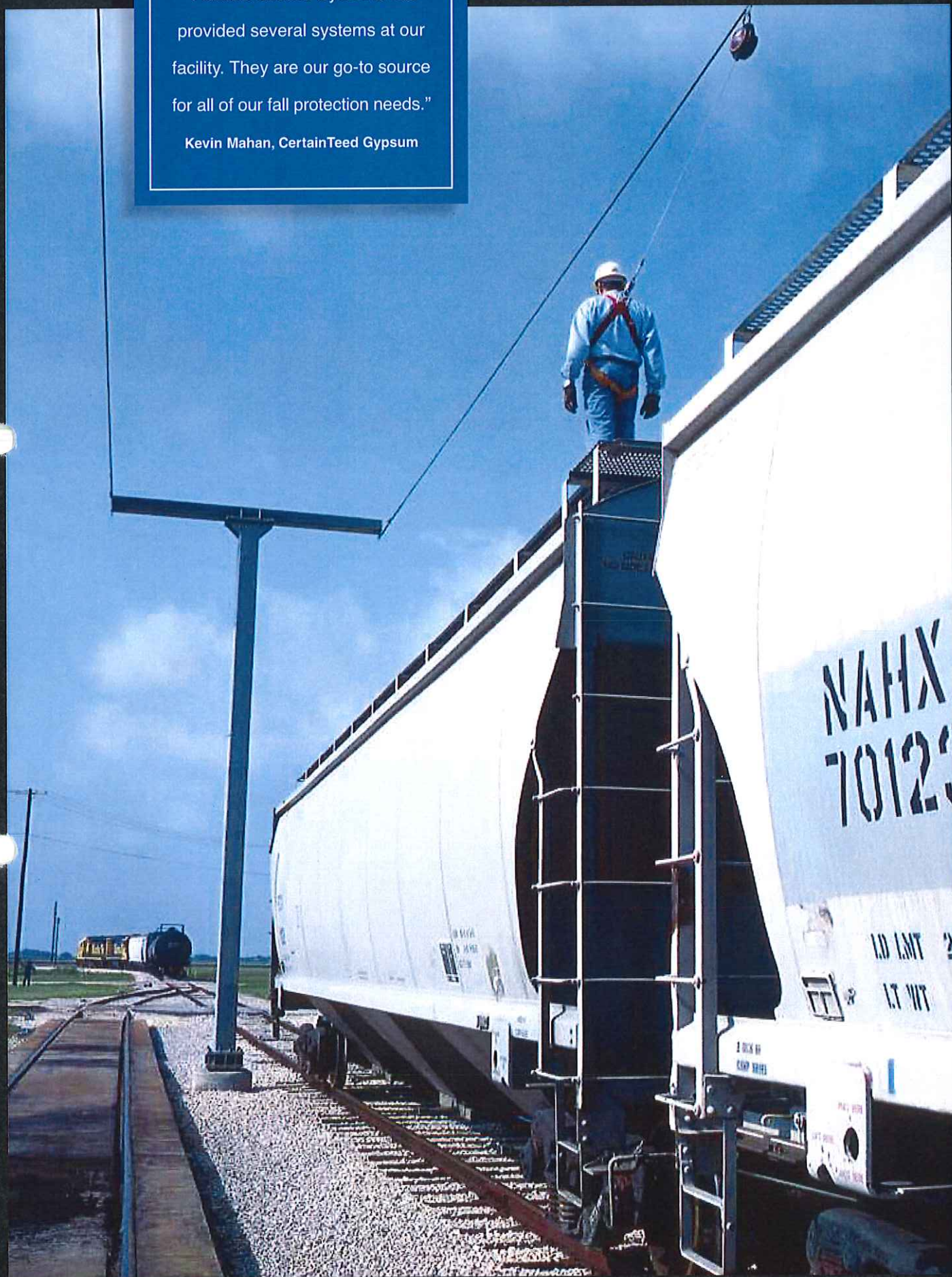
FLS instructors are available to train your staff at your site or at our fully equipped facility in Houston, Texas. From a four-hour Basic Fall Protection Course to our 40-hour Qualified Person Course, FLS will tailor a training program for you.

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FLS provides a full menu of inspection and service options ranging from emergency call-out service to five-year maintenance contracts. Piecemeal competitors can't compare with FLS' turnkey costs and services. With a quality system and more productive workers, your bottom line will quickly show that *FLS Works!™*

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Kevin Mahan, CertainTeed Gypsum



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The **Single Span & Multi Span Flexible Lifeline Systems** are used to access the entire length of one or more railcars/trucks. This cable-based system is capable of single spans of up to 200 feet as well as unlimited lengths with pass-through capability.

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Only the best will do. The smooth operating Overhead Shuttle used on FLS Single & Multi Span installations reflects our commitment to using only the highest caliber of equipment in your safety system.

Multi Span Systems

Featuring a patented overhead shuttle, the system allows a user to travel unlimited lengths, hands-free, without having to disconnect from the system.

All Bases Covered

Thanks to FLS' flexibility, our engineers are able to develop and install both Single and Multi Span Systems that accommodate all your protocols. With these systems, multiple workers have the ability to safely and efficiently access the entire length of any truck or railcar.

- Optional Bypass Capability - Using parallel systems, with each user on their own system, multiple users gain the added benefit of bypass resulting in increased safety and productivity.
- 100% fall protection for multiple users.
- 100% durable marine grade stainless steel.
- All components serial numbered.
- Built-in user friendly tension indicator.
- In-line energy absorber to reduce end loads.
- All weather use so your workers can stay on the job.



Fall Protection when you need it most

FLS WORKS!.



No More Ice and Snow Build-Up

FlexRail's enclosed track completely eliminates snow or ice buildup, providing unprecedented ease of movement when you need it most – on that icy railcar or truck.

No More Dust and Debris Buildup

Another benefit of FlexRail's enclosed track is the elimination of debris build-up, giving you maintenance-free systems even in dusty, dirty environments such as grain facilities. Completely eliminates debris falling into your railcar or truck, contaminating your load.

Ease of Use

The system is completely hands-free, allowing the employee to concentrate on the task at hand. Due to the 1:100 movement-to-weight ratio, the retractable lifeline remains directly overhead at all times, eliminating the possibility for an in-line swing fall.

Future Expansion

The modular style makes it easy to add sections when you expand your capacities.

Affordability

Combine a competitive initial cost with minimal ongoing maintenance, increased productivity and peace of mind, and FlexRail Systems may well be the choice for you.

Reliability

Flexrail gives you year-round capacity – all environments, all climates.

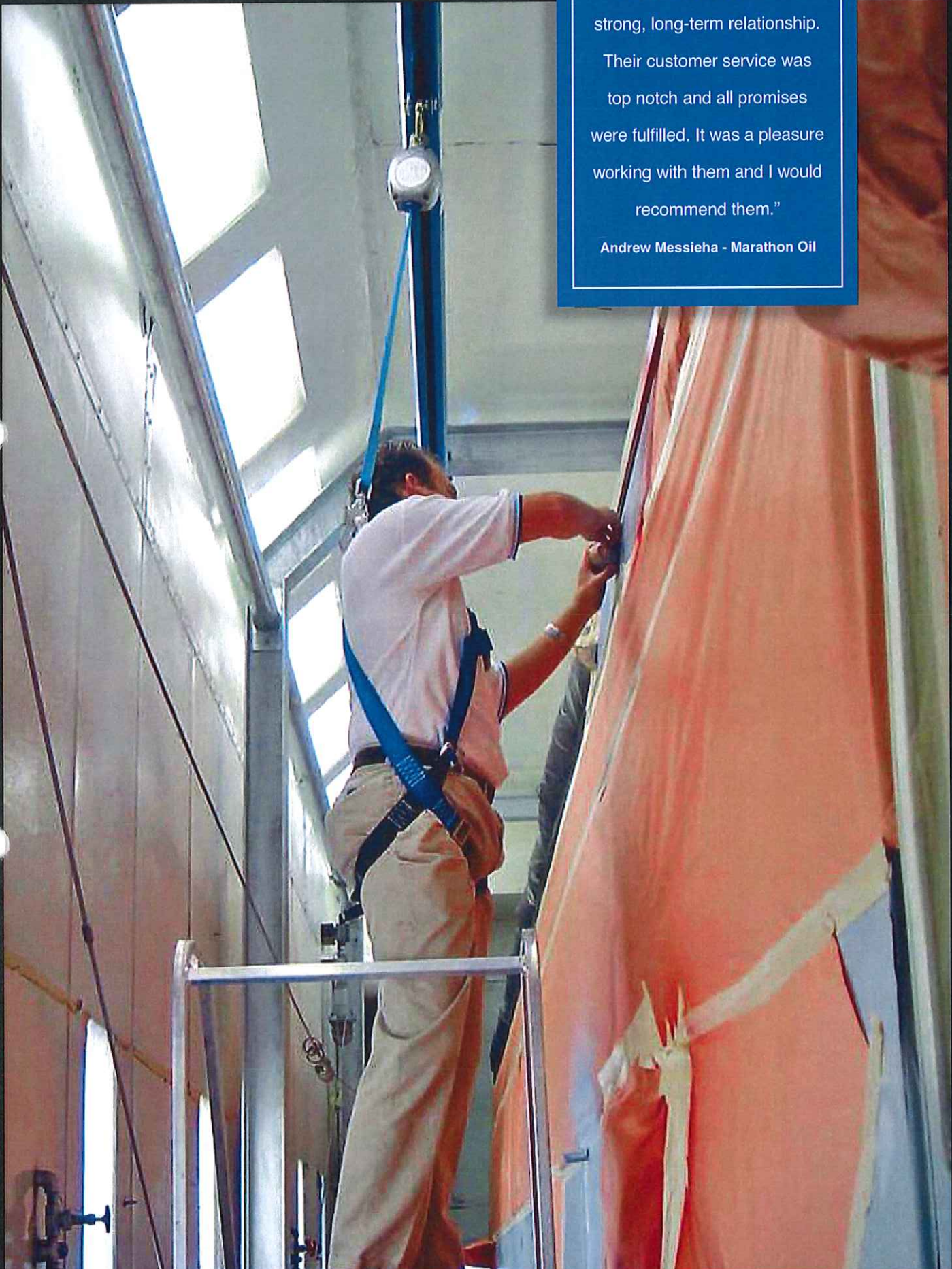
Optional Bypass Capability

With this option, multiple users gain the added benefit of bypass.

Durability

All structural components are hot-dipped galvanized or coated for added durability and corrosion control.



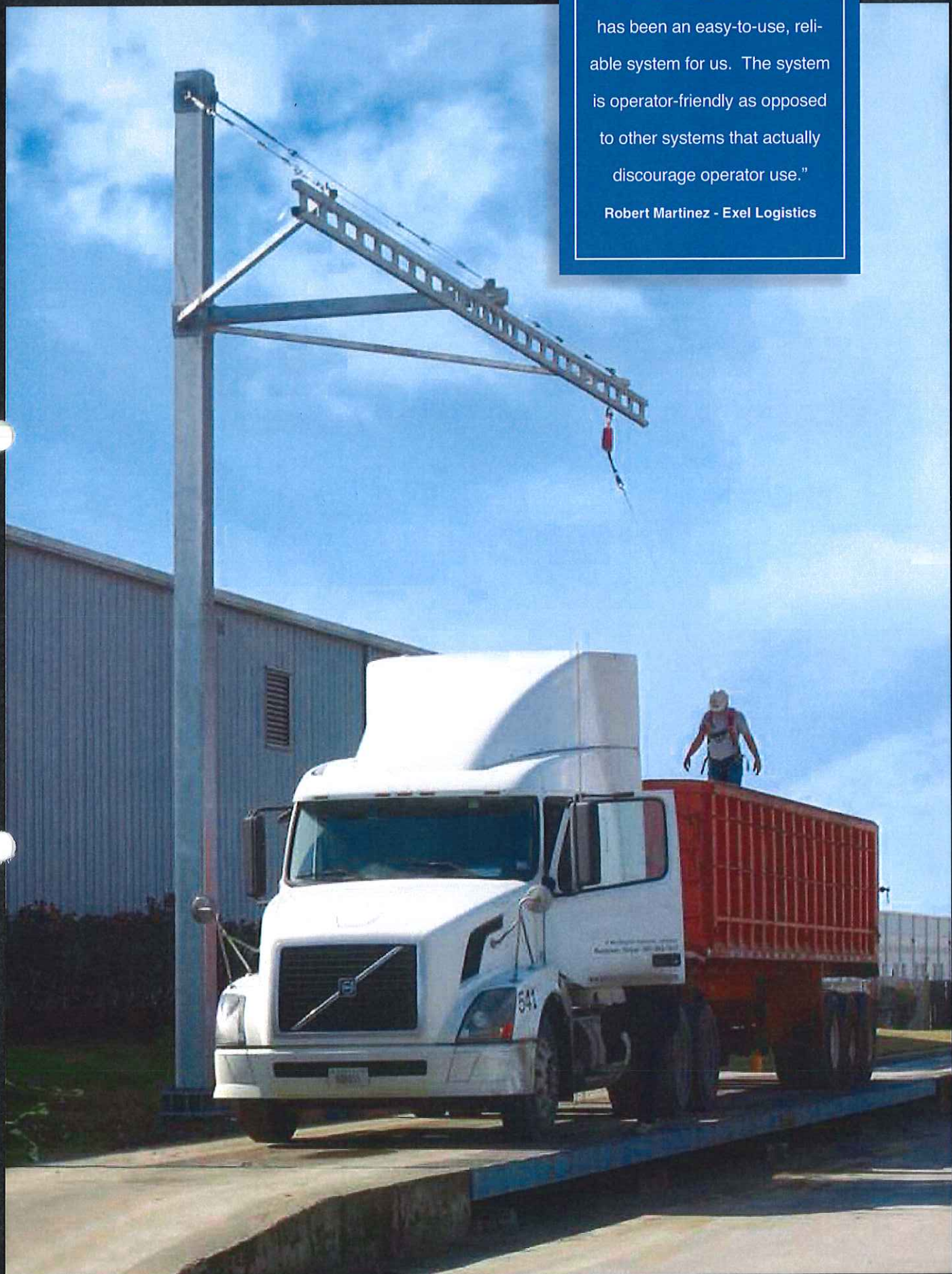
A full-page photograph of a worker in a white shirt and tan pants, wearing a blue safety harness, standing on a silver scissor lift platform. The worker is reaching up to adjust a blue strap on a vertical blue metal beam. To the right, a large orange tarp is partially visible, secured with yellow straps. The background shows a white metal structure with skylights.

"FLS strived to establish a strong, long-term relationship. Their customer service was top notch and all promises were fulfilled. It was a pleasure working with them and I would recommend them."

Andrew Messieha - Marathon Oil

"The Flexible Lifeline System has been an easy-to-use, reliable system for us. The system is operator-friendly as opposed to other systems that actually discourage operator use."

Robert Martinez - Exel Logistics



MORE ABOUT FLEXRAIL



Single Pedestal FlexRail

The Single Pedestal FlexRail System combines the FlexRail System with a single column and pier. It is ideal for congested areas where multiple pedestals would interfere with traffic flow.



Access Stairs and Platforms

The systems are available with a stair and access gangway to provide safe and easy access.



Attaches to any Structure

FlexRail systems can be custom-manufactured to attach to any structure as needed.

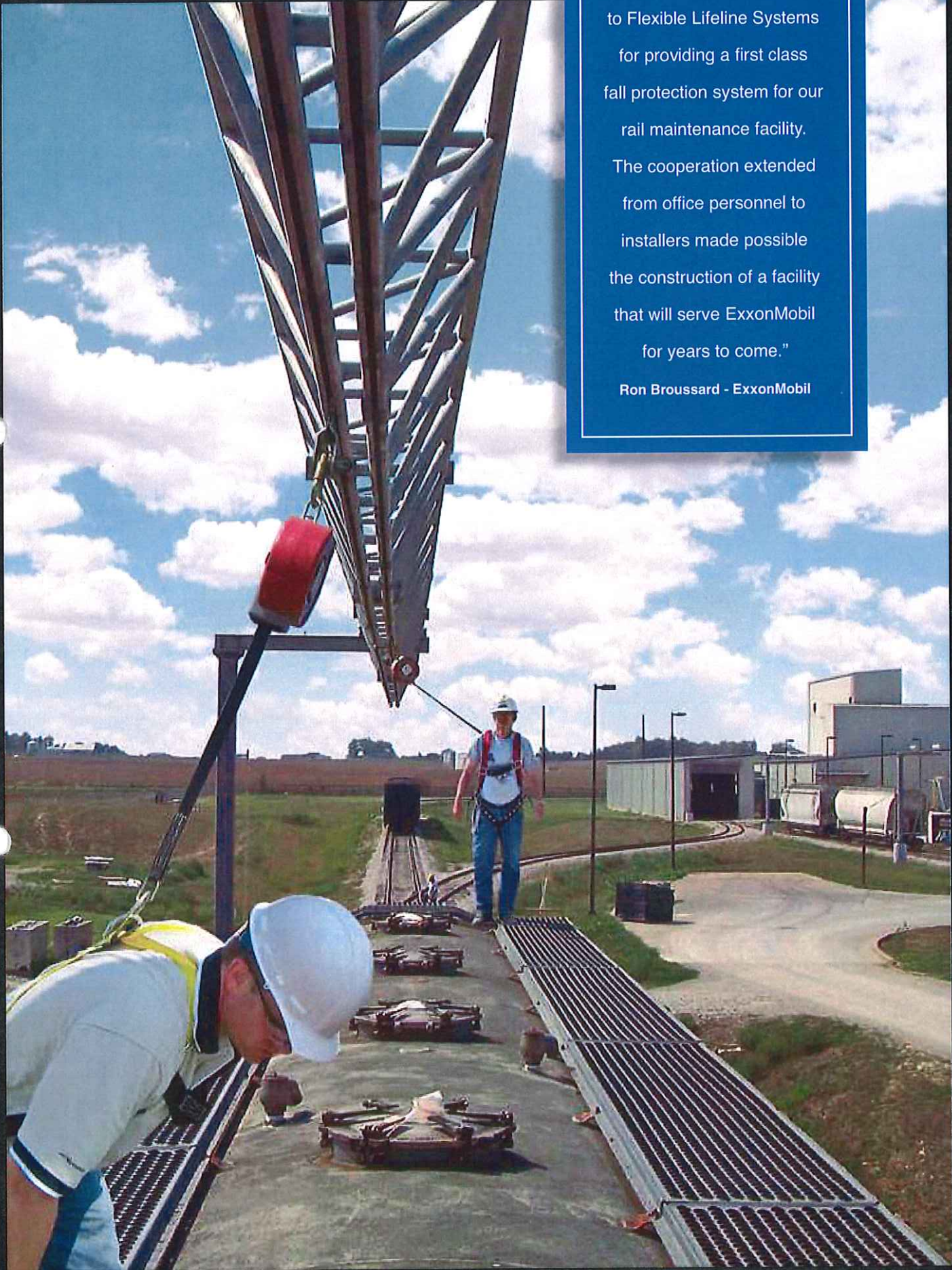
While this is ideal for low overhead applications, the low weight-to-movement ratio means high overhead systems are feasible



even with the longest retractable lifelines.

FLS' safety industry experts' comprehensive understanding of the multiple connection and span options available makes attaching FlexRail to any structure possible.





"A word of appreciation
to Flexible Lifeline Systems
for providing a first class
fall protection system for our
rail maintenance facility.
The cooperation extended
from office personnel to
installers made possible
the construction of a facility
that will serve ExxonMobil
for years to come."

Ron Broussard - ExxonMobil



Scenario: It's an icy day, the wind is blowing...*hard*. You have to get up on that railcar to sample the contents. You must trust your fall protection system to protect you even in the most inclement conditions and environments. **As our customers in the Arctic Circle know**

FLS WORKS!®

Long Span Capability

The patented Twin FlexRail system (PATENT D605,825) can have 100' spans between supports and 30' cantilevers past end supports, resulting in fewer obstructions in your facility.

Curves

The Twin FlexRail System can be designed to accommodate curved rail sidings, providing complete coverage of all of your railcars.

Bypass Capability

Two individual enclosed tracks provide bypass capability. With each user on their own enclosed track, multiple users gain the ability to pass each other resulting in increased safety and productivity.





"I admired FLS' great communication and that they were able to complete the project in a safe and timely manner. FLS is an excellent turnkey company to work with."

Tyler Zeto - Cargill

Truck and Railcar Loading Racks: FLS provides a full line of access platforms and gangways, from single access platforms to multi-station loading systems.

FLS WORKS!



Single Hatch Access Platforms

Can be outfitted with a large variety of gangways and safety cages to fit your needs.

Single or double-sided station access.

Available in three heights for tank truck and railcar access.

Features a 4' x 6' platform with a work surface customizable for your application.



Tracking Gangways

Operates with a movable mount that allows the gangway to move along the platform.

Provides virtually unlimited access to one or multiple vehicles.

Designed with swing gates on the track opening to provide safe gangway access.



Multiple Hatch Access Platforms

Includes optional canopies for weather and product protection.

Single or multiple access and egress paths.

Easily integrated into current site equipment.



PERMANENT ACCESS

FLS provides a full line of multi-modal and full vehicle enclosure systems.

FLS WORKS!®



Elevating Access Platforms

- Elevating platform provides fast, easy working height adjustment.
- Self-leveling gangway provides safe access to the platform at any height.
- Optional flip-up floor panels allow full access to vehicle, virtually eliminating spotting problems.
- Multi-modal safety enclosure is the only system that services different bulk loading carriers – of varying heights and styles – from one location.
- Complete 42-inch-high handrail system creates a safe working area in almost any weather or environmental conditions.



Safety Enclosures

- Customized to meet your requirements, from a small, single hatch access system to full truck or hopper car enclosure.
- Surrounds the top of the vehicle being accessed, providing excellent fall prevention.





"FLS resolved an ongoing safety issue with our refinery catalyst loading dock. Prior equipment designs were not user-friendly and avoided by workers. FLS developed an easy-to-use overhead system that doesn't hinder personnel. Practical solution for fall protection is what FLS delivers."

Kim Matherne - Hovensa Refinery

TRUCK TARPING SYSTEMS

Sustaining a fall while tarping flatbed trailers can be life threatening. FLS is the world

leader in manual and automatic safety solutions for flatbed truck access.

FLS WORKS!®



**FLS provides simple to use,
cost effective solutions**

to keep your operators safe
while making your process
more efficient.

When you purchase a Tarping System from FLS you get:

- A complete turnkey solutions provider.
- The assistance and guidance of our design force to help you come up with the perfect loading site for your application.
- Flatbed trailer platforms that allow drivers to get on and off of vehicles quickly and easily for sampling or securing loads.
- A flatbed tarping system that not only provides a safe way to access the trailer bed, but also provides for quick and easy tarping of the load.
- On-site safety inspections and project walk-throughs to help you design the solution for your budget and situation.

"I would recommend the products installed and the expertise of your team."

Ricardo Loera - General Mills



The FLS Powered Tarping System automatically tarps flatbed trailers.

The operator simply connects the tarp to the spreader bar and guides it down the length of the trailer via the powered winch. The need to climb onto the trailer bed is eliminated.

Features:

- Available in a variety of construction materials.
- Designed as either a free-standing unit or attached to your existing structure.
- Optional platform and stairs available to provide safe access to sides of trailers.
- Industrial strength electric winch that picks up the tarp and pulls it the full length of the trailer.
- Power cable that is kept taut via a tension reel.
- Track designed to be longer than your trailer, making tarping an out-of-position flatbed possible.
- Spreader bar that attaches to the tarp via two clips, making set-up fast and easy.
- Hand-held remote that operates the winch with a simple touch of a button.

MOBILE ACCESS

FLS provides the safest solutions for mobile access to tank trucks or railcars. Our OSHA-compliant systems are available in lightweight aircraft aluminum or heavy duty galvanized steel. The FLS Mobile Access Platform features a rugged basic winch and zinc-plated steel



Options for Mobile Access Platform Systems:

Platform Assembly

Large 54-inch unit can be customized by adding corner sleeve mount and pair of corner extension arms with adjustable screw legs for stability.

Fold up Mast

Designed for general confined space entry/retrieval applications.

Adjustable Step-up Extension

Ideal for simple inspection and minor maintenance tasks. Extends from 28 inches to 42 inches, and is recommended for use with the FLS guard rail cage or tie-off post.

Side Moving Wheel Kit

Your MAP will gain mobility by adding the side moving wheel kit, complete with a pair of durable urethane wheels.

hardware for maximum corrosion resistance; it can be customized for added stability. The system adjusts from 9 feet to 14 feet of working height, and can be customized by wheel kit and other safety add-ons.

FLS WORKS!.



Fall Arrest Tie-off Post

An anchor point with an 1800-pound-proof load that allows you to use SRL blocks and other shock absorbers with a MAF rating of 900 pounds.

Guard Rail Cage

Five-foot cage protects your worker and comes with two outriggers equipped with non-slip rubber foot pads for extra stability.

Fall Out Bar

Designed to fill the large gaps under the guardrails. Bar is positionable, and mounts quickly and easily onto the guardrail cage. Adjusts specifically to your application needs.

Trailer Hitch Attachment

Transports your unit easily.

Additional Screw Legs

Will add stability and lock the Mobile Access platform in place. Choose the 12-inch set for the urethane wheel kit, or the 18-inch set for the pneumatic wheel kit.

Upper Platform Handrails

A final option for added safety.

WHY CHOOSE FLS?

Because **Flexible Lifeline Systems** sets the global standard for fall arrest solutions.

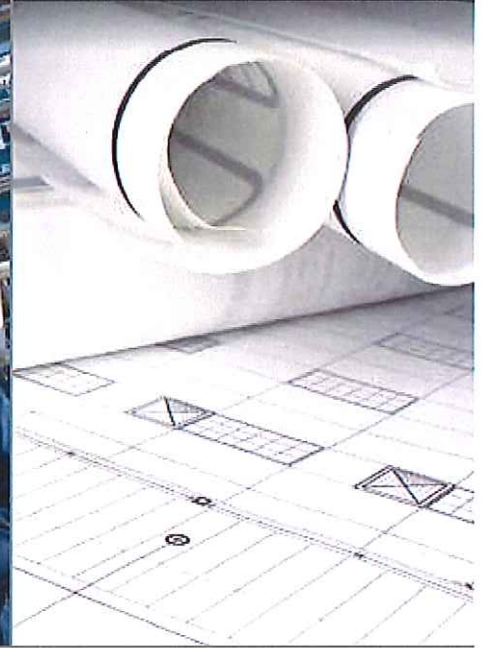
UNRIVALED EXPERIENCE



INDUSTRY BEST EXPERTISE



INNOVATIVE SOLUTIONS



Focus

Our sole focus is innovative fall protection systems. We design and engineer fall protection. Period.

Experience

FLS has designed and installed more fall protection systems in more applications and industries than any other fall protection system contractor.

Professional Engineers

FLS' Registered Professional Engineers are highly experienced in the loading characteristics of fall protection systems.

Multiple Solutions

FLS provides multiple proven solutions for each application.

Turnkey Service

FLS has built its reputation through the self-performance of all phases of fall protection installation including engineering, fabrication, installation, certification and training.

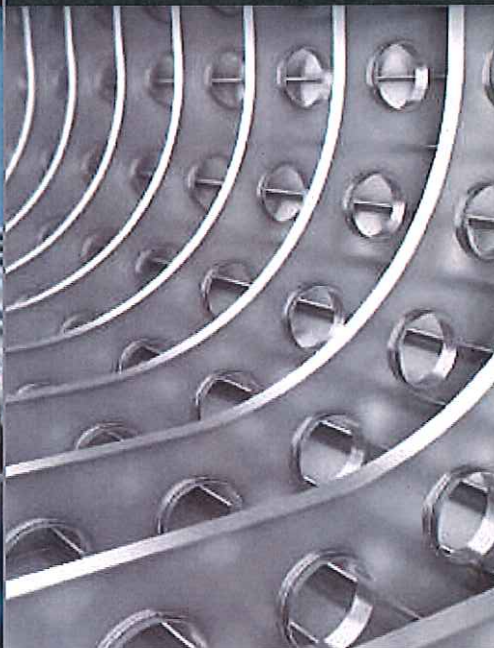
That's why businesses concerned with safety and productivity know



ATTENTION TO DETAIL



A HISTORY OF SUCCESS



FLSWORKS[®]



Knowledgeable Systems Specialists

FLS' Systems Specialists are the most highly trained and knowledgeable sales force in the fall protection industry. Think of your Systems Specialist as your own personal fall protection consultant.

Quality Assurance

Our uncompromising QA Team guarantees *FLS Works™* exactly as planned on every installation. We utilize ISO 9001:2000, API Q1, 7th Edition, and ISO/TS 29001:2003 systems which are designed to the highest standards of ongoing quality assurance. Our QA policy is simple; always meet or exceed our customer's requirements and the highest recognized industry standards. No exceptions.

Satisfied Customers

Our clientele includes a wide range of industrial companies, military organizations, architects, engineers and contractors who come to us, not only for product knowledge, but for design and technical assistance. We pride ourselves on excellence - supplying proven solutions, technical services, and extensive industry experience. *FLS Works!™*

FLEXIBLE LIFELINE SYSTEMS™

www.FlexibleLifeline.com

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PLATFORM



FREE-STANDING
HORIZONTAL RAIL
SYSTEMS



TIEBACK ANCHORS



SOCKETS & DAVITS



FREE-STANDING
CONSTANT FORCE POST



SKYLIGHT SCREENS



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