

Tirants maritimes DYWIDAG



Principe

Composants

Installation

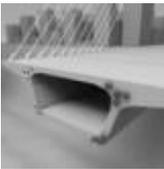
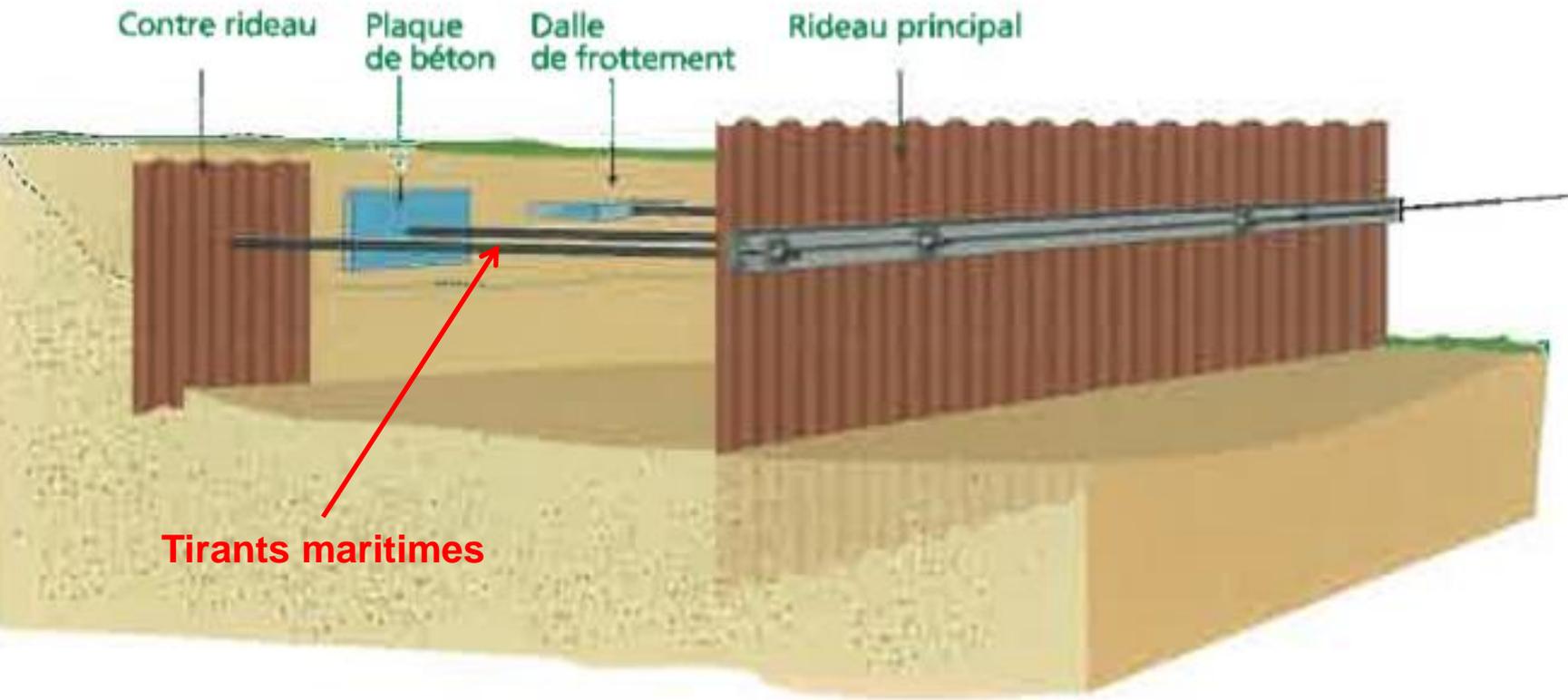
Articulation

Protection contre la corrosion

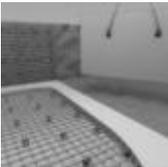
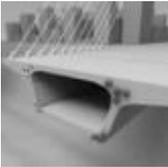
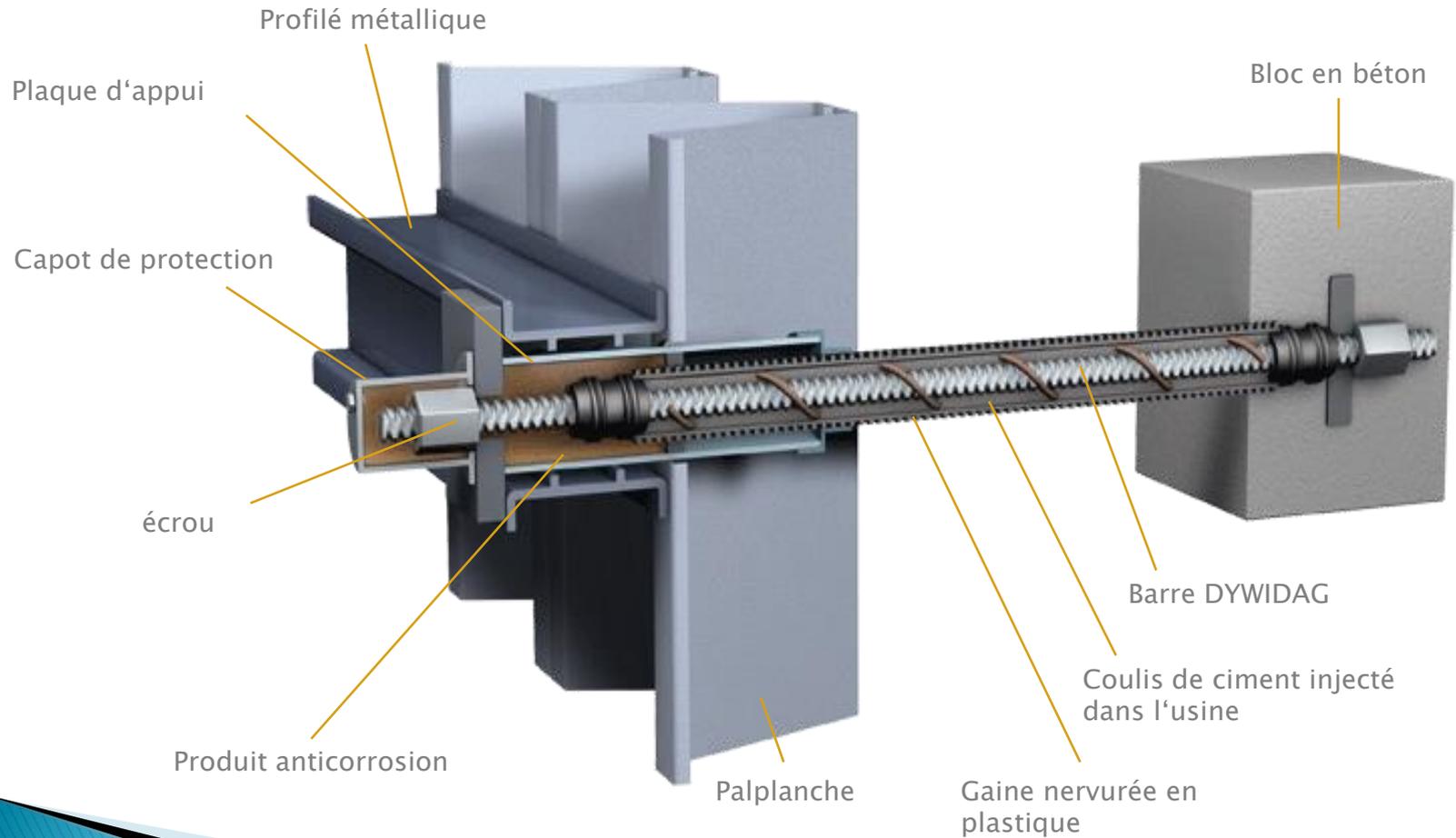
Conclusion

Principe

Maîtriser les déplacements des rideaux de soutènement



Principe – exemple de système



Composants – armatures DSI

Bars

Type	cross section A <i>mm²</i>	Yield Load F_{yk} <i>kN</i>	Ultimate Load F_{tk} <i>kN</i>	Design Load acc EAU 2004 $F_{tg,Rd}$ <i>kN</i>	Weight G <i>kg/m</i>
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GEWI Plus

S 670/800

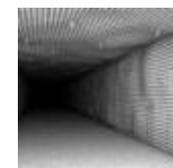
35 TR	962	645	770	586	7,55
43 TR	1.452	973	1.162	885	11,4
57 TR	2597	1740	2077	1582	20,38
63 TR	3.167	2.122	2.534	1.929	24,86
75 TR	4.418	2.960	3.534	2.691	34,68

GEWI

BST 500S

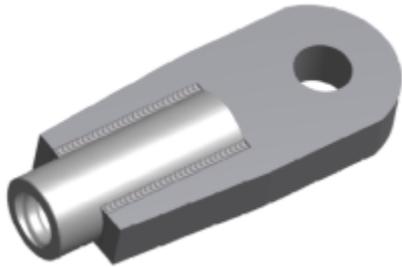
40 T	1257	628	691	571	13,6
50 T	1963	982	1080	892	15,4
63 T*	3167	1758	2217	1598	24,86

*S 555/700

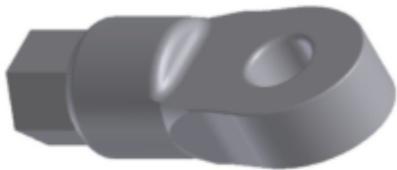


✚ Composants – *connections*

▪ Chape mâle

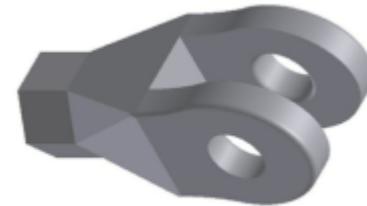
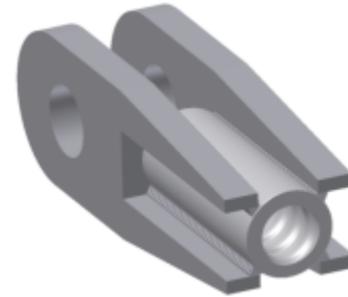


▪ Acier soudé



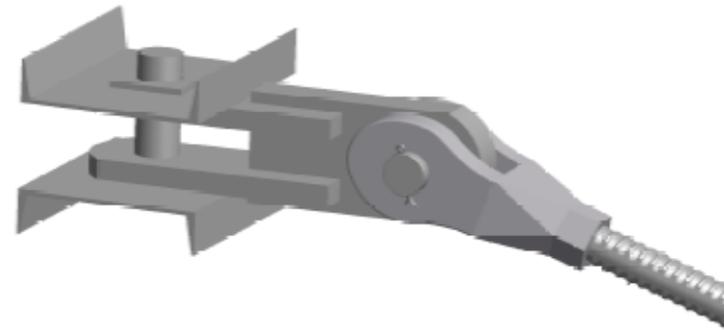
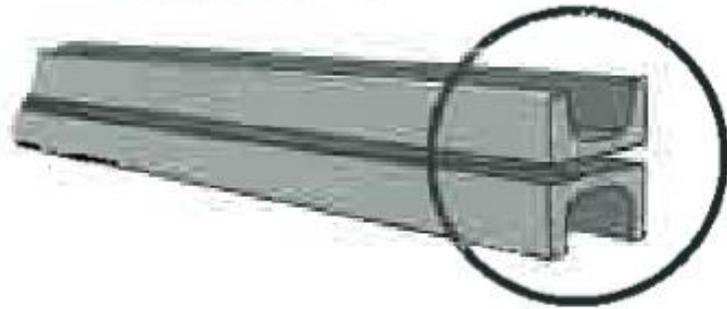
▪ Acier moulé

▪ Chape femelle

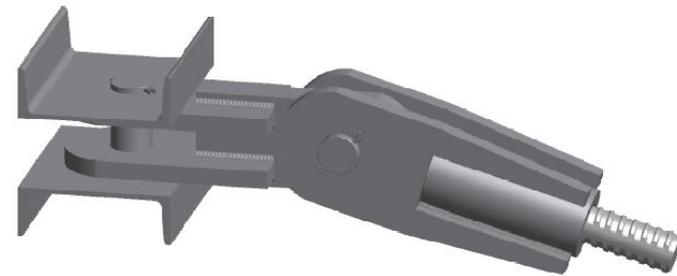


✚ Composants – *connections*

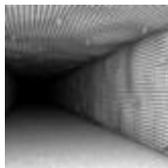
Lierne en "U"



■ Acier moulé



■ Acier soudé

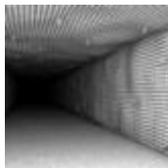


✚ Installation – méthode 1

Installation par l'extérieur des rideaux

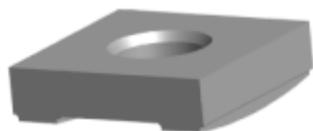


- ✓ Installation simple
- ✓ Serrage ou mise en tension possible
- ✓ Raccordements par manchons standard
- ✓ Flexibilité sur la longueur des barres

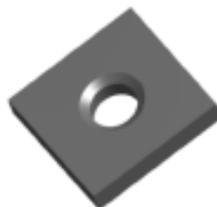


✚ Installation – méthode 1 – *connections et accessoires*

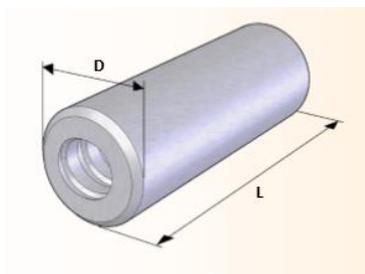
Installation par l'extérieur des rideaux



Plaques



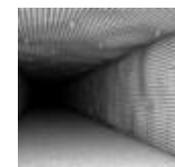
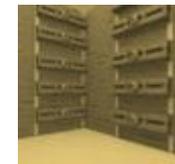
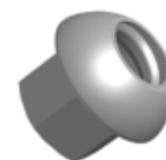
Pièce d'ancrage



manchon



écrous



✚ Installation – méthode 2

Installation par l'intérieur des rideaux



- ✓ Pas de mise en tension
- ✓ Longueur des barres exactes requise
- ✓ Connection des barres entre elles par un manchon différentiel
- ✓ Fixation par soudure aux extrémités



✚ Installation – méthode 2 – *connections*

Installation par l'intérieur des rideaux



Chape mécano-soudée

Chape et plaque de liaison soudable



manchon différentiel

Chape moulée



Oeil mécano- soudé

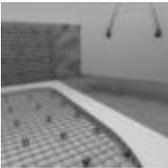
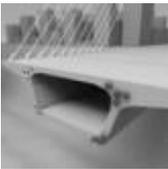


Oeil et plaques de connection soudables

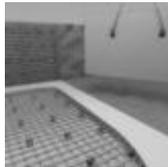


oeil moulé



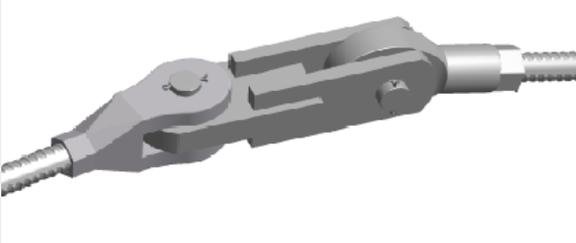


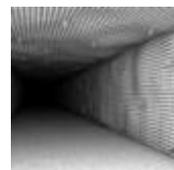
Articulations



Les systèmes de connection

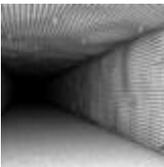
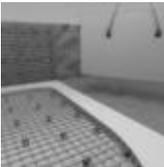
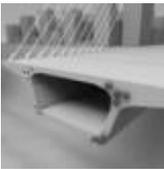
▶ Double chape

	eye and clevis	2x clevis
soudé		
moulé		



Protection contre la corrosion

- Peinture epoxy
- Epaisseur sacrificielle
- Double protection P2
- Zinguage
- Galvanisation (complète ou partielle)
- Bande grasse DENSO

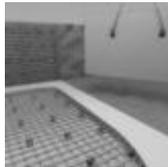


Protection contre la corrosion

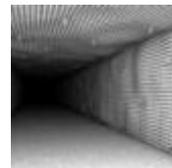
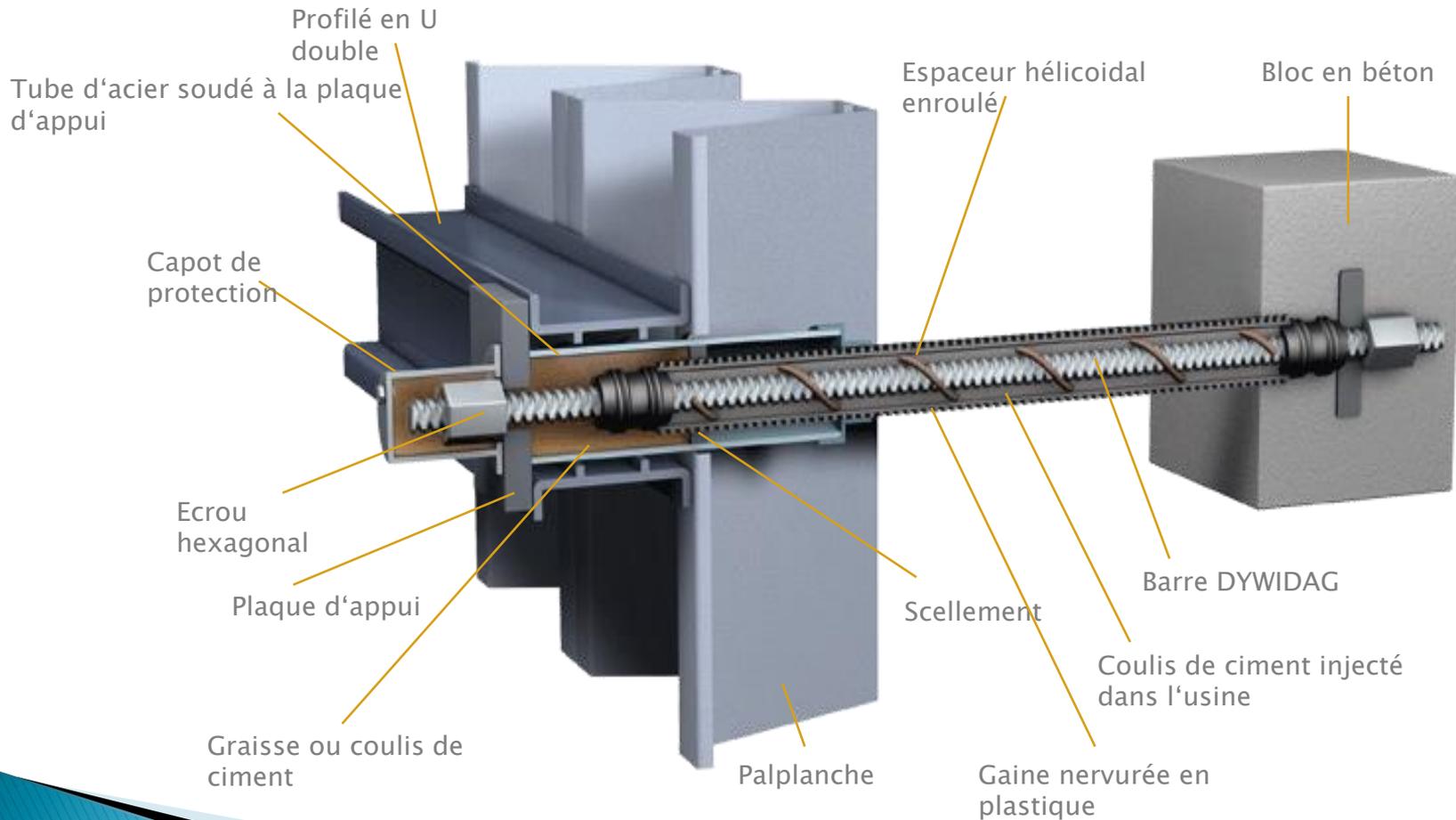
- ▶ Peinture epoxy



Galvanisation partielle

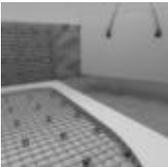
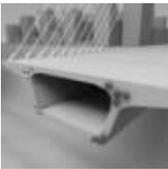


- ▶ Tirant avec double protection contre la corrosion (DCP)
- ▶ Recommandé pour des applications permanentes dans des environnements agressifs



Protection contre la corrosion

- ▶ Bande grasse



- Double Protection type P2



GEWI®

\emptyset [mm]	Section [mm ²]	Poids barre brute [kg/m]	Poids barre DCP [kg/m]
40	1257	9,86	13,6
50	1963	15,41	21
63,5	3167	24,86	32,4

GEWI®Plus

35	962	7,6	11,3
43	1.452	11,4	15,8
57,5	2.597	20,4	30
63,5	3.167	24,9	32,4
75	4.418	34,7	38



DCP THREADBAR® - exposed section



DCP THREADBAR® - cross section area