assentoft silo

Procedurer for fremstilling af siloanlæg
Silo plant manufacturing procedures

Assentoft Silo A/S
Silovej 1
Assentoft
DK-8960 Randers SØ
Phone +45 86 49 45 66
Telefax +45 86 49 48 63
www.assentoftsilo.dk
www.aabybromaskinfabrik.dk
CVR nr. 67 17 14 11

assentoft silo

Indhold: Contents

assentoft silo

1 Organization Organisation

1.1 AS

Assentoft Silo A/S er specialister i design, levering og montering af siloer, trykløse tanke, biogas-reaktortanke, stiger, gallerier, gangbroer, pneumatisk eller mekanisk transport system, filtersystemer, såvel som forskellige typer af udlosning eller dosseringssystemer og lignende udstyr. Siloerne fremstilles enten af dobbeltsidigt glasemaljerede stålplader, galvaniserede stålplader eller galvaniserede, malede stålplader. Projekterne udføres specifikt efter kundeønske. Siloerne leveres for sammenboltning på opstillingsstedet.

Assentoft Silo A/S specializes in designing, supplying and erecting silos, pressure-less tanks, biogas reactor tanks, machinery supports, ladders, galleries, walkways, pneumatic or mechanical transport systems, filter systems as well as different types of discharge and dosing systemes and similar related equipment. The silos are either made of enamelled, painted or galvanized mild steel. The projects are made to suit specific customer requirements. The silos are supplied to be bolted together on site.

Management, sales and production:
Assentoft Silo A/S
Silovej 1
Assentoft
DK-8960 Randers SØ

Administration, salg og production:
Assentoft Silo A/S
Silovej 1
Assentoft
DK-8960 Randers SØ

Tlf.: +45 86 49 45 66
Fax: +45 86 49 48 63
E-mail: info@assentoftsilo.dk
www.assentoftsilo.dk
www.aabybromaskinfabrik.dk

Persons to contact (direct phone/mobile phone):
Projektleder Peter Møller
Project manager Peter Møller (+45 87 95 15 55, 20 72 14 16
Byggeleder Svend Kejser
Site Manager Svend Kejser (+45 22154566)
Admin. Direktør Anders Damgaard Nielsen
Managing director Anders Damgaard Nielsen (+45 87 95 15 71, 40 63 45 66)

1.2

Proceduregodkendelse
Procedure approval 1

Denne procedure, rev. 1, er godkendt af Assentoft Silo A/S, Peter Møller, den 1.6.2012
Og af kunden:
This procedure, Rev. 1, has been approved by Assentoft Silo A/S, Peter Møller on 1.6.2012 and by the customer on:

1.3
Tillægsarbejder
Additional work
Alle tillægsarbejder skal være skriftligt beskrevet, de økonomiske forhold afklaret og godkendt af bade Assentoft Silo A/S, Peter Møller, og Kunden, inden tillægsarbejdet kan påbegyndes.

All additional work must be described in writing, financially settled and approved by both Assentoft Silo A/S, Peter Møller, and by the Customer, before starting up any additional work.

1.4
Tidsplan
Time schedule
På ordretidspunktet udarbejdes der en tidsplan af Assentoft Silo A/S og Kunden. Hvis Assentoft Silo kommer bagud i tidsplanen, kan det tabte forsøges indhentet igen ved overarbejde eller indsættelse af ekstra arbejdsskift. Forsinkelser, som skyldes Kunden, andre entreprenører eller vejrlig, kan forsøges indhentet, hvis dette skønnes nødvendigt af Kunden. Indhentning af forsinkelser som skyldes Kunden, andre entreprenører eller vejrlig, betragtes som tillægsarbejder, jævnfør punkt. 1.4. Forsinkelser som alene skyldes Assentoft Silo A/S forsøges indhentet på samme vis, men uden omkostninger for Kunden.

At the time of placing the order, a time schedule is prepared by Assentoft Silo A/S and the Customer. If Assentoft Silo A/S is behind schedule, the company must try to make up for this delay by working overtime or procuring extra work shifts. Delays owing to Customer, other contractors or weather conditions can be made up for if this is found necessary by Customer.
Making up for delays due to Customer, any other contractors or weather is considered as additional work, according to item 1.4. Attempts will be made to make up for delays only due to Assentoft Silo A/S, without any costs for Customer

2 Design

2.1
Materialevalg
Hvor ikke andet er nævnt, er materialet S235JR eller tilsvarende
Choice of material
If otherwise not mentioned, the material will be S235JR or similar

2.2
Statik
Danske/europæiske standarder anvendes som basis for design og fabrikation. De nye Euro Codes anvendes som primær basis for design og fabrikation. Til udførelse af div. beregninger har vi et nært samarbejde med forskellige ingeniørfirmaer med speciale i stålkonstruktioner. Kvalitetssikringssystem EN/DS 1090 anvendes.
Statics
Danish/European standards will be used as design and fabrication basis. The new Euro Codes are used as primary design and fabrication basis. We have a close cooperation with a number of engineering companies, specializing in steel constructions regarding various calculations. Quality control system EN/DS 1090 is applied.

2.3
Tegningsfremstilling
Assentoft Silo A/S skal som minimum have 15 arbejdsdage til at lave detaljerede tegninger. Tegningerne udføres som Autocad Inventor tegninger.
Preparing drawings
Assentoft Silo A/S must have at least 15 working days to prepare detailed drawings
The drawings are made on AutoCad Inventor

2.4
Godkendelse
Tegninger som fremsendes til godkendelse, skal være skriftligt godkendt af Kunden indenfor den aftalte tid. Der foretages ingen indkøb eller fabrikation af Assentoft Silo, før tegningerne er skriftligt godkendt.
Approval
Drawings presented for approval must be approved by Customer in writing within the agreed time. No purchase or manufacturing will be made by Assentoft Silo A/S before approval in writing is received.

2.5
Ændring af tegninger
Eventuelle tegningsændringer skal være beskrevet skriftligt, de økonomiske og tidsmæssige forhold afklaret og godkendt af både Assentoft Silo (Peter Møller) og af Kunden, inden tegningsændringer foretages.

Modifying drawings
Any modification to drawings must be described in writing, and finance and time schedule matters must be cleared and approved by both Assentoft Silo, Peter Møller, and by Customer, before any modifications are made.

3 Materials Materialer

3.1
Typer
Følgende materialer anvendes:

Primær stål:	S355JR eller lignende
Sekundær stål:	Alm. Sort konstruktionsstål
Rør og fittings:	Alm. Sort konstruktionsstål
Tilsatsmaterialer:	Typegodkendte elektroder eller tråd

Types
The following materials must be applied:

Primary steel:	S355JR or similar
Secondary steel:	Normal mild steel
Pipes and fittings:	Normal mild steel
Filler materials:	Approved electrodes or thread

3.2
Certifikater
Certifikater skal sendes til Peter Møller.

Primær stål:	2.2 certifikater
Sekundær stål:	Ingen
Rør og fittings:	Ingen
Tryk-/vacuumventil:	Certifikat på kalibrering
Tilsatsmaterialer:	Ingen

Certificates
Certificates to be sent to Peter Møller

Primary steel:	2.2 certificates
Secondary steel:	None
Pipes and fittings:	None
Pressure/vacuum valve:	Calibration certificate
Filler materials:	None

3.3
Håndtering
Ved modtagelse af materialer, skal det kontrolleres om antal, dimensioner m.v. svarer til følgesedlen. Alle materialer kontrolleres for skader ved modtagelsen. Eventuelle mangler eller skader, noteres på følgesedlen. Følgesedler og evt. certifikater skal indsamles og afleveres til Peter Møller.
Materialer oplagres på de anviste oplagspladser.
Følsomme materialer som tryk-/vacuumventil og tilsatsmaterialer skal opbevares tørt, inden døre i hus eller lukket container.
Svejseelektroder skal, når de anvendes på pladsen, opbevares i varmespand.

Handling
On receipt of materials, number, dimensions etc. must be checked according to the delivery note. On receipt, all materials are checked for damages. Any outstanding items or damages are stated on the delivery note. Delivery notes and any certificates are collected and handed to Peter Møller
Materials are stocked on suitable storage areas.
Any sensitive materials such as pressure/vacuum valves and fillings must be stored dry inside in a house or closed container.
Welding electrodes must - when used on the building site - be kept in a heating bucket.

4 Personnel qualifications Mandskabskvalifikationer

4.1
Svejseres kvalifikationer
Alle svejsere skal kunne dokumentere deres kvalifikationer til det aktuelle arbejde – ved gyldigt svejsepas. Kopi af gyldigt svejsepas afleveres til Peter Møller inden arbejdet påbegyndes.

Qualification of welders
All welders must be able to give proof of their qualifications for the job in question - by means of a valid welders passport. Copy of valid welders passport to be handed to Peter Møller prior to work start.

5 Safety Sikkerhed

5.1
Organisation
Arbejdet udføres under vor normale sikkerhedsorganisation. Hvis Kunden indkalder til sikkerhedsmøde, deltager en repræsentant fra Assentoft Silo. Krav fra Kundens sikkerhedsorganisation skal følges.

Organization
The job is performed according to our standard safety organization. If the Customer calls for a safety meeting, a representative for Assentoft Silo will participate. Demands from Customers safety organization must be met.

5.2
Personlige værnemidler

Det er Svend Kejsers ansvar, at de for arbejdets udførelse nødvendige, personlige værnemidler er til stede på montagepladsen.
Det er den enkelte medarbejders ansvar at anvende de for arbejdets udførelse nødvendige personlige værnemidler. Hvis der mangles personlige værnemidler eller hvis der snart mangles personlige værnemidler, kontaktes Svend Kejser, som sørger for at fremskaffe det nødvendige.

Personal protective equipment

Svend Kejser is responsible for providing the necessary personal protective equipment to the erection site.
The single employee is responsible for using the necessary personal protective equipment, when working. Svend Kejser is to be contacted in case of lack of personal protective equipment. He is then responsible for providing the necessary, lacking personal protective equipment

5.3
Udstyr til materialehåndtering

Det er Svend Kejsers ansvar at udstyr til materialehåndtering er til stede på montagepladsen, ligesom det også er Svend Kejsers ansvar at udstyret er i orden.
Det er den enkelte medarbejders ansvar at anvende det for arbejdets udførelse korrekte udstyr til materialehåndtering, eller hvis det tilstedeværende udstyr til materialehåndtering er defekt eller på anden måde ikke er i orden, kontaktes Svend Kejser, som sørger for at fremskaffe det nødvendige.

Material handling equipment

Svend Kejser is responsible for the necessary material handling equipment being at the erection site. It is also the responsibility of Svend Kejser that the equipment is in good condition/working order. The single employee is responsible for using the correct material handling equipment for the job. Svend Kejser is to be contacted in case of any material handling equipment lacking, or if present material handling equipment is defective. Svend Kejser will then provide replacement material handling equipment.

6 Arbejdets udførelse – specielle opgaver
Job performing - special tasks

6.1
Svejsning
Alt svejsearbejde på primær stål udføres I henhold til udarbejdede svejseprocedure. Alle svejsninger udføres til niveau C i henhold til DS/EN 5817.
På sekundær stål udføres svejsearbejdet i god håndværksmæssig kvalitet.
Al udendørs svejsning skal foretages som elektrodesvejsning.
Efter svejsning skal slagge og svejsesprøjt afrenses.
Efter anvendelse af midlertidige montagebeslag og lignende, skal disse skæres væk og slibes ned til plan bund.
Der udføres visuel kontrol af alle svejsninger.

Welding
All welding on primary steel must be accoring to prepared welding procedures. All weldings are carried out to level C, according to DS/EN 5817.
On secondary steel, the welding is carried out in good craftsmanlike quality.
All outdoor welding must be made as electrode welding
After welding, residues and welding splashes must be removed.
Having used any temporary erection fittings or the like, these must be cut away and grinded down to even ground.
All weldings are visually controlled.

7 Final documentation Slutdokumentation

7.1
Tegninger, som bygget
Arrangementtegning opdateres til "som bygget" status og indgår I den endelige documentation.
As-built drawings
Plant drawing is up-dated to "as-built" status and is part of the final documentation.

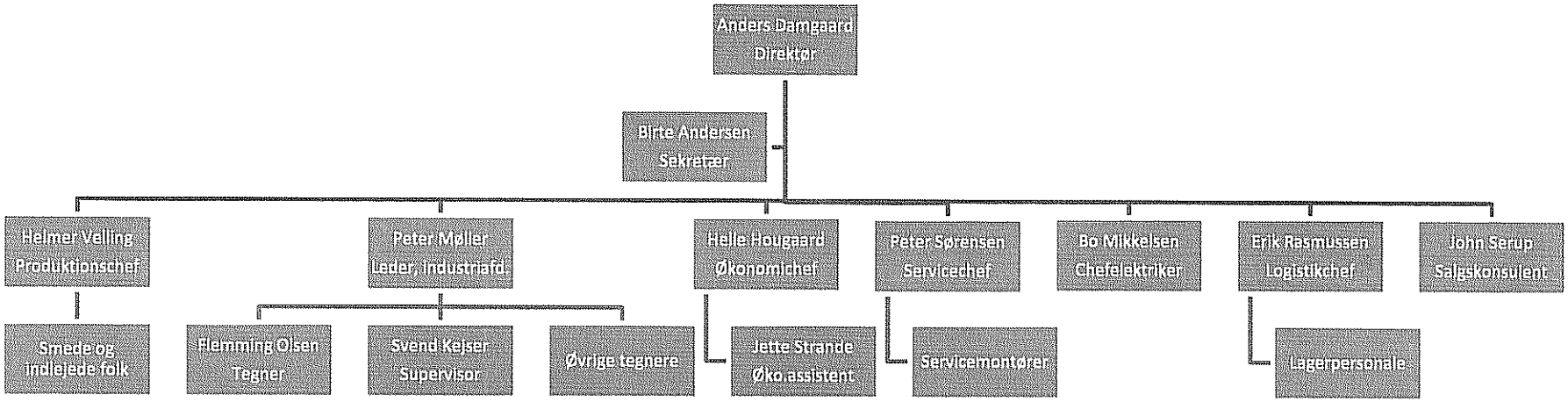
7.2
Svejseres kvalifikationer
Anvendte svejseres svejsepas indsamles og indgår I den endelige dokumentation
Welders qualifications
Welding passports from welders on the job in question are collected and are part of the final documentation.

7.3
Svejseprocedure
Anvendte svejseprocedurer indsamles og indgår i den endelige dokumentation.
Welding procedure
Applied welding procedures are collected and are part of the final documentation.

assentoft silo
Silovej 1, Assentoft, DK 8900 Randers
Tlf. +45 86 49 45 66, www.assentoftsilo.dk

Udsnit af referenceliste

Kunde	Opført, år	Type/antal	Diam.x højde, m	M3/stk	Opbevaring af
T. Skretting AS	94	2 x 610/32	6,10 x 35,86	874	Fiskemel
8451 Stokmarknes, Norge	97	2 x 610/32	6,10 x 35,86	874	Fiskemel
	99	2 x 610/32	6,10 x 41,45	879	Fiskemel
	2011	3 x 773/27	7,73 x 404,5	1360	Fiskemel
Aller Aqua A/S Fabriksvej 1 7000 Fredericia	97	332/13	3,32 x 13,90	78	Blodmel
BioMar AS Sommarøy, 8430 Myre Norge	97	3 x GG 720/27	7,20 x 36	1065	Fiskemel
BioMar, Karmøy N-4262 Avaldnes, Norge	99	3xGG 776/22	7,76x31,00	1019	Fiskemel
T.Skretting AS Averøy, N-6530 Bruhagen, Norge	99	3xGG610/32	6,10x41,45	879	Fiskemel
Kartoffelmelsfabrikken Herningvej 38 DK-7330 Brande	00	VG997/24	9,97 x 27,74	1980	Kartoffelmel
Ålborg Portland Rørdalsvej 44, DK-9220 Ålborg Ø.	01	1	6,00 x 20,00	500	Kød-benmel
Elsam Silo: DK - Fynsværket	02	GG 776/21	7,76 x 30	1060	Kød-/benmel
Energi Randers DK-8900 Randers Havn	03	2xGG610/17	6,10 x 21	500	Kød-/benmel
Faxe Kalk A/S 4654 Fakse	03	Helsvejst	7,5	40	Kød-/benmel
KMC Herningvej 60 7330 Brande	03	3 x SS 886/22 rustfri	8,86 x 24,80	1437	Kartoffelpulver
P/F Havsbrún FO 530 Fuglafjørdur Færøerne	03	8 x GG 886/25	8,86 x 35,50	1522	Fiskefoder
KMC Granules Borupvej 11 7330 Brande	03	3 x 886/22 (rustfri, beklædt)	8,86 x 25	1437	Kartoffelpulver
Karup Kartoffelmelfabrik Engholmvej 19 7470 Karup	04	1330/28 (rustfri, beklædt)	8,86 x 32	4120	Kartoffelprotein- pulver



Assentoft Silo A/S 2013

The Assentoft Industrial team to accomplish the raw material silos at New Greenfield Salmon Feed Factory, Valsneset, Norway:

Peter Møller

Head of the industrial department.

Employed at Assentoft Silo since 1990

As an examined engineer Peter has the theoretical background combined with more than 20 years practical experience from more than 60 industrial projects all around Europe including projects as biogas reactors, silos for foodstuff, several plants along the Norwegian cost for storing raw materials for the fish feeding industry and especially relevant for this project, 12 cement and limestone terminals spread around Europe.

Peter follows his projects very close - from the first contact with the client, during the design process including selection of relevant machines and long lasting technical solutions to the end of commissioning.

Peter is working "hands on" and in an informal way with a good sense of humour with his team, where new solutions from his team members and clients are considered in a serious and open minded way, and often leading to a better end result.

Flemming Olsen

Technical designer

Flemming´s desk is just next to Peter Møller and they have been working very closely together since 2004, where Flemming joined the Assentoft team.

Flemming is "the self-starting" type and an extremely experienced Inventor user, where he makes all our drawings in 3-D. The technical understanding enables him to design the projects in fast and efficient way.

Flemming keeps track of drawings and sub-suppliers for steel parts and instructs people at our workshop for welded parts.

Flemming has been the head designer for several cement silo facilities build in Holland, France, Ireland etc.

Svend Kejser

Supervisor

At our industrial projects, Svend is the first man to enter and the last man to leave the building site, when the job is fulfilled.

His 20 years employment at Assentoft started as apprentice as fitter and welder and during the years he has gained a technical and practical knowledge, that enables him to

make a site run smoothly thanks to his human qualities. He talks as well with the factory manager as the receptionist at the hotel where is staff is lodged, knowing that everybody plays a role and is important to make an installation run smoothly.

An important strong point of Svend is his clear communication skills - never leaving something unclear, and his close follow up with clients and suppliers of parts and services on site.

Assentoft fitters

Skilled fitters

Having worked with industrial and agricultural steel silos for more than 45 years, Assentoft has a strong team of 8 hardworking and skilled fitters with an average working experience at Assentoft of 10 years. Our fitters work professionally and creatively. Having worked on sites all around Europe, they are aware that the accomplishment of a perfect job is on their shoulders and always keeping safety at top priority.

Åbybro Maskinfabrik A/S

Welding facility

A huge part of the welded parts will be fabricated at our sister company, Åbybro Maskinfabrik. A total of 15 people are working near Aalborg - producing round silos, bitumen tanks and welded constructions for Assentoft and other companies.

The factory manager is Torben Hjorth who is a skilled and certified welding supervisor. His level of energy and high quality standards, combined with the experienced skilled staff at the factory ensures the production of welded, sandblasted and epoxy coated products at our own facility.

Teams behind Assentoft

To accomplish this project Assentoft Silo is working closely with our sub-suppliers of which we have several decades of competent collaboration;

IAI, Ib Andresen Industri A/S. A steel service center, which is decoiling, laser-cutting and bending steel segments.

DOT, Dansk Overflade Teknik, A hot dip galvanizing facility, knowing our specifications and working strictly according to their quality programme.