

LR Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the LR Type Approval System.

This certificate is issued to:

PRODUCER	Georg Fischer Piping Systems AG Ebnatstraße 111 CH-8201 Schaffhausen Switzerland
DESCRIPTION	Polybutylene (PB) - plastic pipes, fittings and valves, jointing technique by either compression, fusion or electrofusion.
TYPE	INSTAFLEX (PB)
APPLICATION	Cold and hot water piping systems on open decks, within tanks, cofferdams, void spaces, pipe tunnels and ducts, on board ships, where flame endurance tests according to IMO Res. A.753 (18) are not required.
RATINGS	Size Range : 16 mm to 110 mm I.D. Pressure : PN 10 bar Temperature Range : 0°C to 70°C
STANDARD	LR Rules and Regulations for the Classification of Ships. Flame spread tests acc. to ASTM D 635-91

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify LR of any modification or changes to the equipment in order to obtain a valid certificate."

The Design Appraisal Document No. HMD 7725-02 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Certificate No.	02/20008
Issue Date	15 February 2002
Expiry Date	14 February 2007
Sheet	1 of 1


W.R. JACOBS
Hamburg Plan Approval Centre

1. In these terms and conditions: (i) "Services" means the services to be provided by LR to the Client; and (ii) the "Contract" means the contract for supply of the Services, comprising a request for services and any other LR document relating to the Services; and (iii) the "LR Group" includes LR, its affiliates and subsidiaries, and the officers, directors, employees, representatives and agents of any of them, individually or collectively.
 2. The Client will pay all invoices issued by LR within 30 days of the invoice date. LR reserves the right to charge interest at an annual rate of 2% above the greater of the London Interbank Offered Base Rate (LIBOR) or the equivalent in the country where the Client is based on any amount remaining unpaid beyond 30 days, and may withhold any or all of its Services until the arrears, including interest, are paid.
 3. LR reserves the right to charge for any work that is additional to that for which LR has originally quoted.
 4. LR will keep confidential and not use or disclose to any third party any technical information or operating data derived from the Client in connection with the Services. This obligation will survive termination of the Contract. This obligation will not apply to any technical information or operating data that was in LR's possession before its disclosure to LR, that is or becomes part of the public domain through no fault of LR, or that otherwise lawfully becomes available to LR from an independent source not under a confidentiality obligation.
 5. The Contract continues in force until terminated by LR or the Client, after giving the other party 30 days' written notice.
 6. If the Contract is terminated by LR or the Client before the Services are completed, LR's fees will be calculated on a pro rata basis up to the date of termination. Any reasonable costs directly attributed to early termination and any amounts then due to LR will immediately become payable.
 7. LR's services do not assess compliance with any standard other than the applicable rules of Lloyd's Register of Shipping, international conventions, and other standards agreed in writing by LR and the Client.
 8. In providing services, information or advice, the LR Group does not warrant the accuracy of any information or advice supplied. Except as set out herein, the LR Group will not be liable for any loss, damage or expense sustained by any person and caused by any act, omission, error, negligence or strict liability of any of the LR Group or caused by any inaccuracy in any information or advice given in any way by or on behalf of the LR Group even if held to amount to a breach of warranty. Nevertheless, if the Client uses LR's services or relies on any information or advice given by or on behalf of the LR Group and as a result suffers loss, damage or expense that is proved to have been caused by any negligent act, omission or error of the LR Group or any negligent inaccuracy in information or advice given by or on behalf of the LR Group, then LR will pay compensation to the Client for its proved loss up to but not exceeding the amount of the fee (if any) charged by LR for that particular service, information or advice.
 9. Notwithstanding the previous clause, the LR Group will not be liable for any loss of profit, loss of contract, loss of user or any indirect or consequential loss, damage or expense sustained by any person caused by any act, omission or error or caused by any inaccuracy in any information or advice given in any way by or on behalf of the LR Group even if held to amount to a breach of warranty.
 10. The LR Group will not be liable or responsible in negligence or otherwise to any person not a party to the agreement with LR pursuant to which any certificate, statement, data or report is issued, for (i) any information or advice expressly or impliedly given by the LR Group, (ii) any omission or inaccuracy in any information or advice given, or (iii) any act or omission that caused or contributed to the issuance of any certificate, statement, date or report containing the information or advice. Nothing herein creates rights in favour of any person who is not a party to the Contract with LR.
 11. LR's omission or failure to carry out or observe any stipulation, condition, or obligation to be performed under the Contract will not give rise to any claim against LR or be deemed to be a breach of contract if the failure or omission arises from causes beyond LR's reasonable control.
 12. Any dispute about the Services or the Contract is subject to the exclusive jurisdiction of the English courts and will be governed by English law.
 13. No addition alteration or substitution of these terms and conditions will bind LR or form part of the Contract unless they are expressly accepted in writing by an authorised LR representative. In the event of any conflict between these terms and conditions and any document purporting to impose different terms, these terms and conditions will prevail.
- The following terms and conditions apply only to classification services provided by LR:**
14. Any damage, defect, breakdown or grounding, which could invalidate the conditions for which a class has been assigned, is to be reported to LR without delay.
 15. All repairs to hull, equipment and machinery which may be required in order that a ship may retain her class are to be carried out to the satisfaction of LR's surveyors or to the satisfaction of Surveyors authorised to conduct surveys for LR. When repairs are effected at a port, terminal or location where the services of a surveyor to LR or Surveyor authorised to conduct surveys for LR are not available, the repairs are to be surveyed by one of LR's surveyors or Surveyor authorised to conduct surveys for LR at the earliest opportunity thereafter.
 16. Plans and particulars of any proposed alterations to the approved scantlings and arrangements of hull, equipment, or machinery are to be submitted to LR for approval, and such alterations are to be carried out to the satisfaction of LR's surveyors.
 17. It is the responsibility of the Client to ensure that all surveys necessary for the maintenance of class are carried out at the proper time and in accordance with the instructions of the Committee.
 18. LR may give timely notice to the Client about forthcoming surveys by means of a letter or a quarterly computer print-out. The omission of such notice, however, does not absolve the Client from responsibility to comply with LR's survey requirements for maintenance of class.
 19. When the Regulations with regard to surveys on the hull, equipment or machinery have not been complied with and the ship is thereby not entitled to retain class, the class will be suspended or withdrawn, at LR's discretion.
 20. When reported defects in the hull, equipment or machinery are found and the Client fails to repair such defects in accordance with LR's requirements, the class will be suspended or withdrawn, at LR's discretion.
 21. LR has the power to withhold or, if already granted, to suspend or withdraw any class (or to withhold any certificate or report in any other case), in the event of non-payment of any fee.