der twelve months is hardly able to ground food in his mouth, and his digestive system is not morphologically mature and fully functional yet. Knowledge of rheological behaviour of the disperse systems allows us to satisfy these requirements. We have studied rheological properties of canned fish-and-vegetable food and canned fish monoproducts to identify the effect of various factors on their stability. It is found that the optimal thickness characterizes systems with the viscosity values in the range of $\tau_{S.}$, Па 350 – 900, shear stress η^{0}, Па$_*$с 250 – 700, and the particle size of 15 - 75 μm. The specified values are "recommended parameters", which characterize the optimal thickness of the product and are used to monitor the quality under production conditions.

In order to broaden the baby food range, we make researches to develop recipes of fish soups. It is well known that soups are traditionally the main course in our country. The aim of it is to prepare the child's digestive system to protein food. Soups stimulate appetite and activate the gastric juice secretion. Fish and meat soups have a marked effect on the secretion due to the high content of extractive substances (e.g. amino acids, purin bases, etc.). there are special nutrient-technological recommendations on development of soups appropriate to the needs of young babies: the protein fraction should make 3-5 g of total mass, while dry substances in a pureed soup should make 10-15% (in traditional soup with components chopped into small bits – 5-15%), content of amino acids and fatty acids should correspond to the physiological needs of infants. According to standards set by the Federal Research Institute of Nutrition (RAS), pureed soups are introduced when a baby has attained twelve months and traditional soups/ soups with fish balls could be given to a baby from eighteen months onwards.

Our studies allowed us to develop six recipes of soups with optimal content of amino acids and fatty acids for different stages of development of the infant digestive system. The soups have good organoleptic parameters and satisfy the federal recommendations.

Introduction of the developed technologies for production of new sorts of baby canned food products will contribute to provision of babies with foodstuff appropriate to their physiological needs for nutrients and energy.

UNLOADING GRAIN FROM BUNKER BY SPIRAL-SCREW CONVEYOR

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In bunkers spiral-screwed conveyors are applied to storage of grain at unloading in casings, and also without casings. For reduction of capacity of a drive above a spiral stabilizing plates at various height from it can be installed.

By preliminary researches it is established that grain is unloaded by spiral-screwed working body from that site of the bunker which is most removed from unloading windows. It is necessary to explain the reason of this phenomenon to that the material a screw surface of a spring moves more actively, than the material which is being above the given layer, not having thus of free space for the expiration.

Grain acts in space of a rotating spring and mixs up in an axial direction up to unloading apertures. Speed of movement of layers of grain is not identical and as a result movements of a grain stream the active layer which reason is force of internal friction is formed.

Proceeding from complex internal essence of a bulk material which separate particles are bodies, and all weight has aspiration to current, for the description of behaviour of a "current" loose material it is convenient to assimilate to its some viscous liquid with average, volumetric density and factor of viscosity (internal friction). On the basis of the accepted hydromechanical model dynamics of a loose body can be described the equations similar to equations Navie - Stoks for a viscous liquid.

The received analytical dependences allow to find distribution of speeds at movement of a grain material and to explain features of its unloading from the bunker. Also it is received, that submission of the spiral-screwed conveyor at an unloading of grain from the bunker without a casing in comparison with a casing increases due to an active layer almost twice at the same parameters of a spring and angular speeds of its rotation.

PROBLEMS OF SECONDARY ENERGY RESOURCES SALVAGING AT PETROCHEMICAL INDUSTRY ENTERPRISES

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For petrochemical industry enterprises the main energy resources use efficiency upgrading direc-