

Project Title - 3	Development of spunsilk garments made of hollow yarn
Principal Investigator	S.Kadirvel
Cost	Rs.23.00 lakhs
Date of Commencement	01.10.2009
Duration	24 Months
Date of Completion	30.09.2011
Abstract	<p>The textile and garment industries around the world progress rapidly in terms of increasing productivity, reducing lot size and shortening production time. Development of hollow yarn fabric is one of the areas of current research. These fabrics possess certain improved characteristics such as lower the fabric weight, softer feel, better thermal insulation and improve the comfort properties etc. In fact the entrapped air in the hollow yarn reduces the thermal conductivity and makes the fabric warmer.</p> <ul style="list-style-type: none"> • The hollowness also makes the fabric feel softer, bulkier, and good air permeability. The hollow yarn has a special unique structure with low packing density and high bulkiness that affect the both its structural and mechanical properties. • Core spun yarns will be spun using the spun silk as a sheath and PVA as a core with three different core: sheath ratio using the ringframe with additional attachment. Using these core spun yarns knitted and woven fabrics will be produced. • Finally the knitted and woven spun silk fabrics will be converted into hollow yarn fabrics by treating with 60°C hot water for dissolving the PVA. The properties of the spun silk fabric made of hollow yarn will be compared to normal spun silk fabric and reported.
Highlights	As the garments made of hollow yarn fabrics look brighter and offer better feel and more comfort to the wear, the scope for using hollow yarn fabrics in the manufacture of high performance value added garments.
Area of applicability	Spun silk Industries
Target beneficiaries	The result of this project will help the spun silk industry to improve their marketing potential in casual wear garments.
Status	Ongoing